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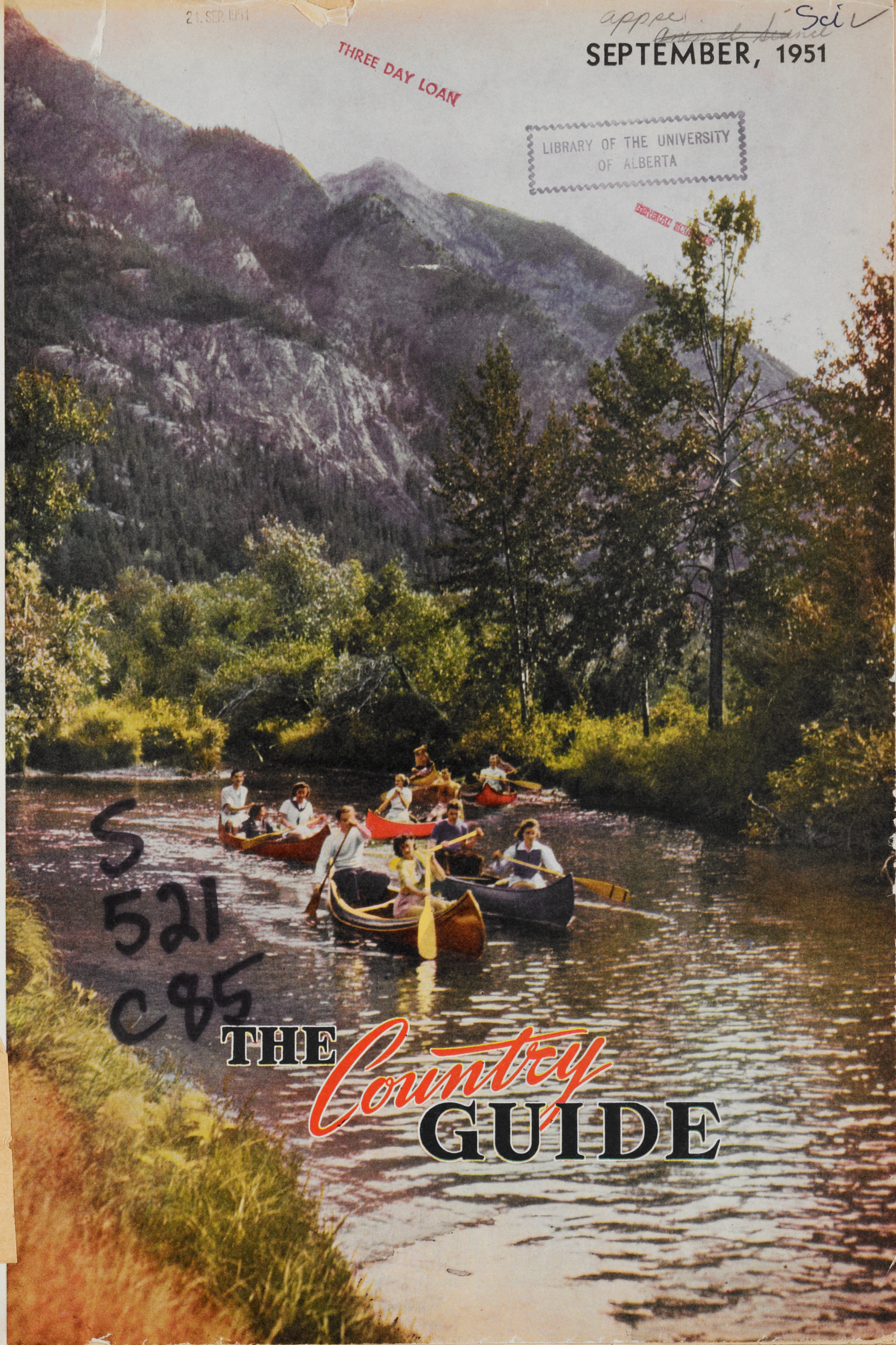



# THE Country GUIDE

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THE Country GUIDE

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# Under the Peace Tower

THE Income Tax Department has changed hands again. Gone is V. M. Scully, the Deputy Minister of National Revenue till recently. In his place there now sits Charlie Gavsie, his former assistant. And thereby hangs a tale of inside Ottawa politics.

Ottawa shopped around, first eagerly, and then finally, almost desperately, to find a new deputy minister for income tax a couple of years back. After the men that they had in mind had turned down the job, an administration, eager to get a head to so vital a department, decided to take V. M. Scully. He was conscientious, he was a hard worker, and he knew his stuff.

From here on, what is actual, and what is apocryphal, is for the reader to decide. Deputy Minister Scully went to his Minister, Dr. J. J. McCann, and asked for absolute powers. He got them. The Doc, who had spent the first 60 years of his life delivering babies, fixing broken limbs, and ministering to the croup in Renfrew County, may not have seemed at first hand to be an ideal choice as a minister in charge of income tax collection, but in many ways, he was.

The first attribute was that Prime Minister Mackenzie King liked him. The late prime minister always admired a man who understood money. However he picked it up, this handsome Irish doctor got to know quite a bit about cash, he became a director of a trust company, and generally speaking, revealed himself as shrewd in the counting room as in the operating room. I might say that this admiration that Mr. King had for Dr. McCann was passed on to Prime Minister St. Laurent.

Now you may well wonder why I am spending so much time explaining the position of Dr. McCann. It was this: that when Dr. McCann told Deputy Minister of National Revenue Scully to go ahead, as far as Scully could see, it was all right. McCann was close to St. Laurent, he had the prestige of a senior minister, he was fearless, and he would be loyal to his deputy. That was all Scully wanted to know.

Scully as income tax czar then tried to put the heat on some of the big shots. He had no worries, he had no fears. He knew that when it came to a cabinet battle, even such political pundits as Hon. Douglas Abbott, Finance Minister, had wilted before Dr. McCann's power. I am trying to say that the Doc had pull in the cabinet. So if Scully wanted to go after a big guy, he knew that he would have the backing of his minister. This is important, because more than one deputy in my time has ended up in the graveyard of buried ambitions, because his minister did not have what it takes.

Not to put too fine a point upon it, Scully was reputed ruthless. It also turns out, that in many a case, you cannot have it all your own way. First of all, a deputy is not supposed to use the might and the prestige of the whole administration to bludgeon a man into helplessness. Second, there is such a thing as a fair deal. In other words, the government cannot forever adopt a "Take It or Leave It" attitude. So Scully was reputedly as tough as he could be, and he more or less indicated to some of the big taxpayers that he'd have their hides. Let me insist here that there is no suggestion of condoning conniving. But it is obvious that the taxpayer cannot be wrong all the time, and the government cannot be right all the time.

The grapevine has it that Scully made his policy stick for quite a while. Then, he got tangling with some pretty tough people himself. Either in all innocence, or in all ignorance, or with some of both, he just did not know who the people were that he was trying to beat. These people, when they found they could not get anywhere with the Deputy, went around to Hon. C. D. Howe.

By now it is apparent to every voter in Canada that the Minister of Trade and Commerce, and Minister of Everything Else at one time or another, is a mighty strong man. Mr. Howe knows who, for instance, is important to the war effort, who is making a real contribution to the national economy. So these big taxpayers, unless there is flagrant evidence of tax evasion, in the opinion of Mr. Howe, have considerable right to their point of view. Mr. Howe figured they had a case.

I shall not say that Deputy Minister Scully was nasty with them. I'll not say that the Deputy Minister was wrong. I'll merely say that he stepped on some mighty important corns without perhaps realizing whose feet they were on.

Here comes the show-down. Deputy Minister Scully then went to his minister, Dr. McCann. But the big industrialists then went to their minister, Mr. Howe. In cabinet, Howe is strong enough to be able to brush McCann off—just like that. Which he did. A bewildered Scully, sure as anything that in any battle with a taxpayer, he could win easily, suddenly discovered that his strong man was a fallen oak. McCann took a beating from Howe in the cabinet. This left Scully all but helpless. It was along about then he began to read the Help Wanted Column.

Mr. Scully now gets his mail in Hamilton, Ont.

# They Pioneered in Gold

by GILEAN DOUGLAS

***A former resident of the Porcupine sifts fact from legend and spins this yarn about the first find in that fabulous land***

*Winter quarters of Lemon and Geddes.*

THERE are few more exciting stories than the tale of the Porcupine gold rush when hundreds of hairy, fly-bitten men poured into the jackpine plains of northern Ontario to make their fortunes. Some of them did—and threw their wealth away on wine, women and song. Others hung on to it and they or their descendants are today in the golden ranks of Canada's millionaires.

Unknown names began to make history: Benny Hollinger, "Sandy" McIntyre (whose real name was Alexander Oliphant), Alec Gillies; George Bannerman and John Wilson who are reputed to have made the great discovery which started it all. But, contrary to certain magazine articles and mining reports, neither Bannerman nor Wilson found the first gold nor staked the first claims in the Porcupine field.

No one can swear whether it was the two trappers, Harry Lemon and Tom Geddes, or young Bob Mustard, river driver turned prospector, who stumbled across the "sunset yellow" in that wild land. At any rate they were all in there in 1907, two years before Bannerman or Wilson, and they all found the wealthy metal then.

Mustard and Billy Moore, a half-breed trapper, were working for Reube D'Aigle who was an old Yukon placer man and knew very little about hard rock mining. They started operations just east of the Mattagami River and close to the old fur brigade route of the Hudson's Bay Company. In a four-foot pit sunk by Mustard and Moore fine gold showed and in a large, quartz-covered outcrop along the trail float gold could be seen. This was the big boulder which the Indians called the "white rock."

It was Bob Mustard who scraped the moss from it—D'Aigle hadn't bothered—and thought that something should be done about it. But D'Aigle was putting up the money and he didn't want to mine anything except placer, so the three men left without staking the ground. It was too far from a railroad, the country was no good for placer, the gold was too fine, nobody in Ontario was interested in anything but silver anyway—that was how D'Aigle argued.

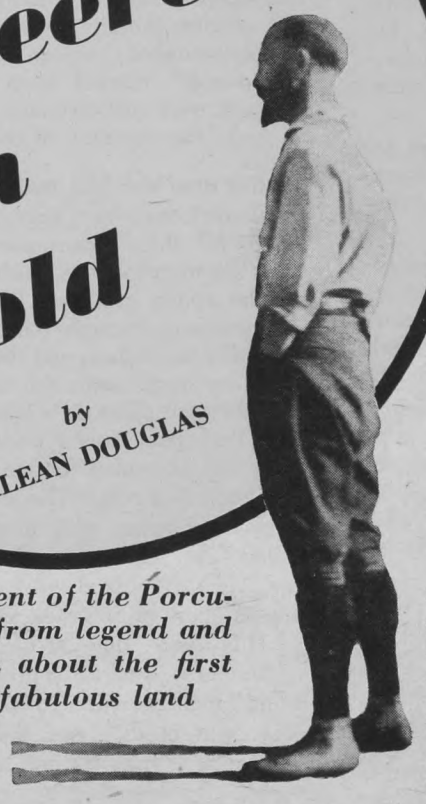
He must have felt pretty sick two years later. The pit they had sunk was close to the main outcrop of the Hollinger, one of the richest gold mines in the world. The dome-shaped quartz outcrop streaked with yellow became the extravagant nucleus of its namesake the great Dome Mine. By the time these facts were known D'Aigle had vanished westward, Moore was back on his trapline and Mustard, sick at heart because of what he had missed, had walked out of the Whitehouse Hotel in Sudbury one winter night and never come back again.

In that same year of 1907 the two trappers, Lemon and Geddes, came out of the northern bush into the hotel bars of Haileybury, 331 miles north of the thriving city of Toronto. The bars—Matabanick, Vendome, Maple Leaf, Attorney—were lined with bronze, bewhiskered men talking silver, silver, silver. Cobalt, four miles south, was in its spectacular heyday then; its 39 silver mines shipping out ore at the rate of 14,851.35 tons in that one year alone. The year before there had been a new silver find at Elk Lake up the Montreal River, and now there were rumors of another in South Lorraine. Soon the bars would buzz with talk of the Gowganda silver strike which would stampede the north into the wildest rush that region had yet seen.

True, there had also been a gold find at Larder Lake the year before, in a district some miles southeast of the Porcupine wilderness. There had even been quite a rush, but it fizzled out soon. After the Rainy River and Lake of the Woods fiasco in northwestern Ontario everyone was pretty skeptical about the yellow metal. So when Lemon and Geddes displayed some samples of gold-flecked ore in the Matabanick Hotel no one was much interested.

"WE was followin' lynx tracks north o' Porcupine Lake," said Geddes, "an' after maybe a mile we come on a rise o' rock showin' quartz stickin' up like a lump o' snow. We broke open the quartz with the back o' the axe an' seen somethin' yellow. Later we knew it wuz gold."

But later, when the alcoholic fumes of their many drinks had mounted to their brains, they weren't sure of their story—so who would believe them?



*Bob MacGregor about the time of the first gold find.*

Finally, disappointed and broke, they managed to wangle enough for a winter's supply of grub and went back to their traplines.

The following year they trailed into Haileybury again, sold their furs and displayed new gold samples in the bars with vacuous grins. The Gowganda rush had simmered down, but still the talk was only of silver. Someone mentioned an American named Hunter who had spoken of "a great, unexplored wilderness 100 miles north of Cobalt, known only to Indians, trappers and couriers de bois."

"That would be the country Lemon and Geddes were in," another man said idly, but no one really cared.

Then one day Scotch prospector Bob MacGregor introduced the trappers to Gore Bruce, a handsome young Englishman. Bruce came of military stock and was more than a bit of a martinet. He had rambled everywhere between the MacKenzie watersheds and Hudson Bay and was the first man to bring gold out of Great Slave Lake—years ahead of the reported finds. But he looked down on all Canadians—"colonials" he called them—and particularly those of the trapper breed. However, he finally decided to take a chance on Lemon and Geddes and persuaded the American, Hunter, to stake him.

On the trail into Porcupine Lake Bruce rationed out the food and tobacco. The one bottle of whiskey was to be used only medicinally. By the time they reached Nighthawk Lake, just south of Porcupine, a good deal of friction had developed between Bruce and the trappers. Nighthawk was roaring and for three days they were held down by the gale, which didn't improve matters.

When the storm finally died down and the three men prepared to go on, Geddes said to Bruce: "Throw over a plug o' chewin', kid."

"Your ration isn't due yet," snapped the Englishman.

"Hand over a plug," repeated Geddes, that spare, dark man.

Bruce's reply was short and insolent. Things went from bad to worse and when they reached Porcupine Lake he was not shown their discovery. He accused the trappers of lying and they—honest men enough and certainly in this—knew that they would never be believed now.

UNWILLING to go back without staking something on Hunter's mining licence Bruce, unassisted, posted low-lying greenstone outcrops on the southeast shore of the lake—just where Golden City would be thrown up in the years to come. These were the first claims staked in the Porcupine, but Hunter didn't bother to file on them and Bruce was soon off on a wild goose chase after diamonds. Another year went by before Lemon and Geddes met another man who was willing to take a chance on their story. That man was George Bannerman, whose find started one of the greatest gold camps in history.

George thought he would never be crazy enough to hit the prospector's haphazard trail. He was tall, well-muscled, blue-eyed and fair complexioned with a simple, friendly way about him. He was a Methodist and he was in love. Much more amazing still, in Haileybury's embottled atmosphere, he never took a drink. Without such a combination of attributes this page of Canadian history might have been written in a very different fashion.

In the golden year of 1909 George drove an ice wagon in Haileybury for a man named MacKinnon. Sitting on his hard seat he spent considerable time figuring how he was going to make enough money to get married. Prospectors in wide Stetson hats woollen shirts and knee-high boots walked with their loose (*Please turn to page* 70)

# WISE ONE of WINDIGO HILLS

*A bald eagle, forced to extend her solitary hunting range, took two of the litter.*

*by* **JOHN PATRICK GILLESE**

LONA was born in a shalestone cave in mid-May. The Alberta prairies, rolling east and south of Windigo Hills, parched under a copper sun that blistered the rocks and made the nights sticky with heat. Too early, the mother's milk failed, and Lona and her six litter mates learned to subsist on the lemon-colored grasshoppers, whose rasping filled the days with a cacophony of song.

That first year, a bald eagle, forced to extend her solitary hunting range, took two of the litter. One of Lona's brothers ventured playfully close to the old rattlesnake pit, in the cool gravel below the shalestone ridge, and never returned. Another trotted foolishly into a barnyard and began lapping water from the rusty wooden horsetrough. The other two pups were weaned early; the coyote parents made routine checks on their progress; by the time tumbleweeds were doing their flyaway broom dance over the cooling prairies, they were left to finish their education alone.

Lona, the frail and fearful one, was the last to abandon the den. She was to survive many dangers —partly from luck, mostly because she possessed the ability to think.

All coyotes have a wiseness far surpassing that of wolves, wits more nimble than any dog's. Lona had patience as well; she learned to wait for hours, paw uplifted by a gopher hole—to scoop in the wet sand till there was enough moisture to slake her thirst.

Inevitably, because she was fearful to abandon the snake-infested haunts, she got struck in the leg. Instead of dying, she developed an immunity to snake venom; all her life, tiny scattered patches of pink flesh, where the fur refused to grow again, bore scarred testimony to the power of the rattlers' venom.

But the snakes furnished a grim security, too. Men, Lona soon discovered, kept discreetly away from the Windigo Hills in summertime.

When she was two years old, Lona had her first litter. She was long-bodied and tawny; her brushy tail had a spot of black; her eyes were straw-yellow. She was part of the blanched prairie—a silent phantom trotting over the sun-tracked fallow fields in early spring; a set of loosely lifted ears rising above the ditches when frost nipped the flatlands and the smell of sugar beets was sweet and heavy on the thin evening air.

Each day in summer, she consumed a third of her own weight, in gophers and other rodents, mostly. She preferred jackrabbits and, in season, saskatoon berries; but these were not always so easily obtainable. Like eighty per cent of all coyotes, she left barnyards strictly alone, though she shared in the curses heaped on her tribe by the minority who develop a taste for fowl.

Any coyote surviving the first five years of life becomes the wisest of all four-footed wildlife. By the time she had lost two mates, Lona was talked of as far away as the Cypress Hills, on the Saskatchewan border.

The packs she joined—for yodelling only, never for raiding — cried and sobbed like little children when the weather was to be hard. In a full moon, they chorused exultantly. Sometimes lonely farmers would stand outside their doors and howl tauntingly at the coyotes merely to hear them answer; their unearthly symphony, woven about the basic "*Kowf-a-howf-a-woo!*" carried from knoll to valley to strawstack, over vast distances, to wherever the last pack spoke the yearning of their restless souls.

BY the time she had reared her fifth litter, the tale of Lona was a saga of the Windigo Hills.

Then, for three years, she went barren. Most coyotes are monogamous, faithful while their mates live. The young are their life and their joy, and Lona mourned through those cheerless summers. Perhaps her barrenness was the fruit of age. Female coyotes are sterile some ten months of every year, and as they get older, it is harder for them to have young. Perhaps it was a nervous reaction to fear, for life was becoming harder on the prairies now.

Irrigation had come. The crops were lush; the sons of the farmers who, in a fashion, had befriended Lona, had time and money for shooting again. They organized winter coyote hunts, in which as many as 500 men took part. The Windigo Hills, with their scrub brush and snow-filled ravines, was a favorite hunting area. Bewildered by the shotgun blasts, Lona fled in fear at first; then learned to crouch in the blanched gulley grass; when hunters were within feet of her, she bolted under a drop-ledge and backtracked. The hunters yelled and shot wildly; they never retraced for a lone coyote, but the number of Lona's kin thinned on Windigo Hills.

More strawstacks dotted the prairies; in hard winters, Lona sought them for their squeaking mice. She climbed to their tops, raised her muzzle to a blue night moon and sobbed. Dogs answered . . . till the night was filled with a lonely symphony of song. Once when the moon made the night as clear as day, a rifle flashed jagged flame from a farmhouse; a coyote beside her rolled in a twisted heap down the stack, his song cut off in his throat.

Lona cried, as often she had wailed passing the lonely prairie shacks where homesteaders had died. There is a smell to Death; and, like dogs, coyotes are drawn to him. The *coyotl* of New Spain followed man into the eastern states and upwards to the Arctic circle—always cursed and despised, yet always eking out an existence close to him; able only to outwit man, never to depart from him. Perhaps this yearning is part of their soul-drawn soliloquies to the moon: it is plaint that man can only interpret, never describe—and never forget . . .

That winter, an airplane dropped out of the clear skies, where Lona pawed the snow for mice. Over the motor's roar, Lona heard the thick twin blasts of a shotgun. Pellets bored into her hindquarters, but the force of the shot was spent. Lona understood. Man was carrying his hate even into the skies; and when she heard the planes in the distance again, she lay motionless in a patch of withered quack-grass, or beside a clump of wild barley—a grey lump in the winter's snow.

In early March of the most crucial year of her life, a coyote hound, bevelling his tongue and uttering great *bowl-wowl-wowling* barks, loped across ditches, hot on her heels.

Lona had been playing with a new mate that day, a dog bigger and heavier-shouldered than any she had ever known. Instantly the two coyotes separated; the hound followed Lona. In great leaps, he gained on her, with a speed she had never seen in any animal. She doubled her own pace, zigzagging through a linefence, till, after three hours, the strength was gone from her, and she could only stand at bay.

The hound did a strange thing then. He closed his great slavering jaws, wagged his thin, long tail and tried to be friends. The dog's owner understood and cursed. "They told me a dog wouldn't touch a female coyote in her love month," he muttered. "Should've bought a bitch . . ."

OVER the precarious years, those were the highlights of danger. Other than that, Lona's life was largely spent in scrounging for food, or in playing with her young. Unless the pups were with her, she wandered about 40 miles a day, catching gophers in summer; jackrabbits, mice and the occasional pheasant and prairie chicken in winter. She had her scent-posts for receiving the messages of her kind; her favorite lookout along her route; special rimrocks where she yowled to the moon.

The Indians regarded her with awe as a reincarnation of all wise coyotes; she had been there when the prairies were dotted with buffalo grass and millions of bison, they said; she would always be there—the Wise One of Windigo Hills. Before the white man came, the Indian and the coyote were friends.

Then, on a hot and windless April dawn, 61 days after mating, Lona knew that soon again a brood of young would pull tails and play about the old shalestone den. Her trot homeward was slow and

content; till suddenly a jackrabbit punted from his low dirt burrow. He thumped the ground once; then, like a miniature muley deer, leaped high across the fallow fields, now turning to gold dust in the first slashes of sunlight.

Lona, heavy with young, and with the sun in her eyes, gave instant pursuit—a tawny flash, streaking, gaining . . . Too late, she felt the ripping impact that, like a coil-spring, threw her back, almost senseless, on the packed earth. The frantic rabbit had deliberately sprinted beneath the barbed wire of the linefence.

For minutes, blood rose in a fine spray from the great slash across Lona's forequarters. Then, sucking air heavily, she rolled weakly in the dry earth, till the fur on her forebody was matted red and stiff. Slowly and painfully, she journeyed up the damp coulee to the old shalestone ledge.

***The saga of a coyote who learned in a hard school***

There were five pups; their eyes were shut, and they were the last family she would ever have. They were born as the first nighthawks tumbled through the dusk and twanged their lonesome *bzz-opp; bzz-opp!*

Her recently acquired mate came by moonlight, two barnyard chickens in his big jaws. He was a regular raider, but now he brought her the choicest spoils. Every chicken, every rabbit, went to Lona.

IN his own time, he had likewise been befriended—once when he grew gaunt and hairless from the effects of a rifle shot; again when he swallowed a poison that had been lying too long to be fatal. He knew man and learned from him, but in times of necessity, such as this, he raided unhesitatingly. Those who call coyotes cowards may never have realized that, in any language, sacrifice for those in distress is the hallmark of all courage. In the wild-world of western Canada, only the coyotes help one another, strangers as readily as kin, and even to the point of death.

Lona's wound was slow to heal, and she nursed it carefully, licking it while the pups fed. She suffered for water, but, while a week-long heat wave withered all but the green irrigation fields, she never left her couch before the cave. Instinct told her to stay still.

The heat caused even the dog-coyote to lie in the shade of the rocks, his tongue lolling. The rattlesnakes sought their deep, cold lairs. The sparrows thronged the irrigation ditches. Only the gophers sat up on their haunches and played on the burning rocks. They popped into their holes at sundown, not needing the dew that fell heavily at nights.

For Lona, in a stupor now, the days were agony. Her tongue was so thick that she could no longer eat the carrion and chickens brought faithfully by the anxious dog. Her milk was lessening daily, and the pups whimpered fearfully. The big dog, whining in anguish, disgorged half-digested meat for them, but they were still too young to eat it.

In desperation, Lona belly-crawled to a catchpool below the old rattlesnake pit, but the stones were covered with dry dirt. On the way back, her wound opened again and bled in black clots. Of all cuts, those left by barbed wire are the hardest to heal. When she got back to the pups, they pulled on her hungrily and cried for more. She was too sick to comfort them.

With dawn, a faint breath of wind stirred the prairies. Keen noses tasted it; short muzzles lifted and yipped hopefully. By noon, great thunder clouds had gathered in the west. All that evening, all the hot night, lightning veined the inky sky. Men shook their heads and said it was only a thunderstorm to cool the air. But the coyotes knew better.

With morning, the rain fell straight and limp from a murky sky. The catchpool filled and overflowed. Lona drank; then regurgitated for the young ones, who shivered in the den. They had never seen rain before.

By the time the fireflies were glowing and dying like a million cigarette tips in the night, Lona's wound was covered by a thick, clean scab. The pups were as big as cats now; bounding about the shalestone ledge, they rolled and wrestled, biting tails, growling with playful roughness. The dog-coyote brought them chickens regularly, literally laughing at the smelly steel traps a dozen farmers left for him. Lona began foraging in the cool of the afternoons, handicapped to the point of vexation by her stiff, shortened muscles.

On such a patrol, a yip-yip of surprise and terror sent her loping back to the den. She arrived in time to see a great rattlesnake, a suspicious bulge in his neck, slithering balefully towards the old breeding pit below. The rattler had been old when Lona was young. Now he weighed nearly thirty pounds; his broad, flat head set off an icy, smiling face. When Lona pounced, the snake coiled to strike: his fangs were yellow-white with age. Lona retreated, for even in heartache, coyotes are wise.

The loss of one pup was a mortal blow to the aging mother. Worse was the sight of a second reeling dizzily about, its body bloating rapidly. The pup died as sunset painted a great ember backdrop against the dark headland of prairie. Lona and the dog offered a prolonged dirge over its body.

With the cool morning, the rattlers slid out of the pit again. Above them, the coyotes lay together, motionless. A moist slithering scraped the dry upper rocks. The smiling head of the old king rattler appeared, hungry for another filling meal.

As the sun grew hot, Lona directed her puzzled, but obedient, mate and the three scared pups. For two hours, the rattler tried to slither within striking distance of the pups; Lona moved only when it seemed he might succeed. Coyotes, as the old rattler knew from instinct, have killed snakes. He was wary.

The intense heat of mid-morning sent the other snakes back to the coolness of the cavern. Reluctantly, at last, the old king began to retreat.

It was then Lona pounced; he coiled in defence. When he uncoiled again to begin his slow slither, the big dog-coyote, grasping his mate's strategy, feinted. The furious snake coiled again. Lona slashed in behind, snapping at the weaving neck. Poor co-ordination—the result of her stiff fore-muscles—caused her teeth to snap inches short of the rattler's throat. The blunt head turned and stabbed—aimlessly.

WHEN the rattler finally uncoiled once more, he was further from the pit than ever. The heat was lifting ozone from the rocks.

More than uncomfortable now, the rattlesnake sought desperately to retreat. The two coyotes pounced from either side. He was forced to coil, his tail burring static hate.

In three hours, the great snake was limp—stretched out, peeling and lifeless, in the sun. The coyotes had never actually struck him; they had merely kept him on the hot rocks till the unbearable heat, fatal to rattlesnakes, killed him.

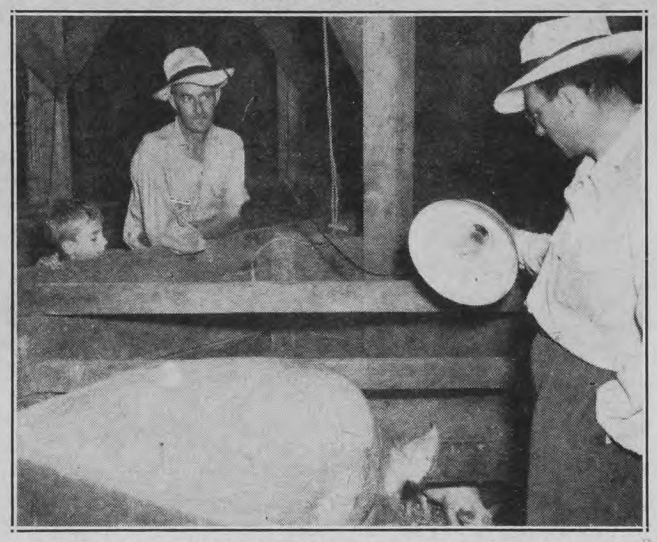
When the saskatoon bushes hung purple with berries, education of the three pups began in earnest. Never was there a better teacher than Lona. The old wound on her chest throbbed tautly and sapped her fleetness. But the coyote brain compensated.

Daily, Lona led the way to the sandy hills where hundreds of straight-sitting gophers whistled and streaked for their burrows. Lona blocked the entrances of certain gopher holes, then nabbed the returning rodents as they darted for the closed openings, searching in bewildered panic when they could not get down it.

She played a meaner game with the friendly packrats who inhabited the shady coulees to the west. In each of the countless caves, some large packrat had his pile of sticks and rubbish behind which he retreated when danger threatened. Lona would drop suddenly as if dead, her body limp, her tail straight. After awhile, curiosity would bring the buff-colored woodrat near. Lona never missed, though the pups, at first, often caught nothing but the packrat's tail, so loosely attached that the slightest tug detaches it.

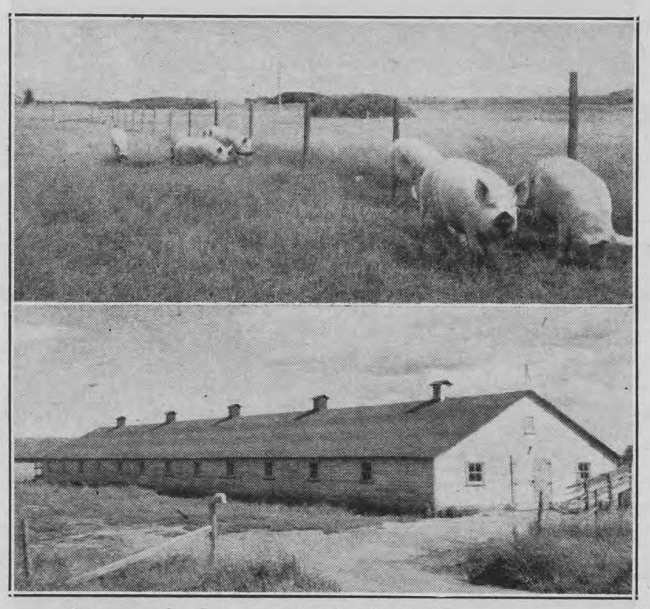
The jackrabbits on the field were more prized fare, but Lona was still so erratic in her motions that generally it required teamwork with the dog coyote to catch them. (*Please turn to page* 41)


***By the time she had lost two mates Lona was talked of as far away as the Cypress Hills.***



*Fred Hamilton (right) holds the lamp and reflector used to provide heat in brooders at the Morris hatchery. W. Fraser, hatchery manager, looks on.*

# One Chore Less



*Some of the purebred Yorkshire sows on pasture at the Arborg hatchery and the building in which sows farrow.*

***Pig hatcheries relieve the owner of the specialized business of operating a farmyard maternity hospital***

**by RALPH HEDLIN**

A NEW idea that could revolutionize the swine industry is taking a firm grip in western Canada and the north central region of the United States. This idea is the specialized, large scale production of weanling pigs for sale to feeders. Establishments indulging in this type of enterprise have been dubbed "pig hatcheries."

Pig hatcheries are likely to become a part of the western scene. Already, in their formative stages, they are getting enthusiastic support from erstwhile hog producers who have gone out of production because they were fed up with acting as midwife to temperamental sows; who want to cut risks by not raising their own young pigs; or who lack the time and inclination to attend to brood sows throughout the year.

There are a number of hatcheries currently operating in the West. The most ambitiously planned is, perhaps, one at Dawson Creek, British Columbia, in the Peace River block. A co-operative hatchery is getting nicely started at Arborg, Manitoba, in the interlake country. There is another co-operative pig hatchery at Choiceland, Saskatchewan, but it has been sadly battered by the inroads of disease. At Morris, Manitoba, in the Red River Valley, 40 miles south of Winnipeg, another hatchery is operating under the aegis of the Manitoba Wheat Pool. Plans are proceeding for a co-operative hatchery at Tisdale, Saskatchewan.

If you cross the line into the United States, you will find hatcheries in Iowa, Indiana, Michigan; a number in Minnesota; 22 in the state of Wisconsin, and going concerns in other states. Furthermore, the number is increasing in the States, as it is here, as the idea catches on more firmly.

The principle of operating hatcheries recognizes that the small producer finds it troublesome and costly to keep sows and raise weanling pigs. In an area where farmers are interested in feeding hogs, a good pig man can specialize in raising weanlings for his neighbors; or a co-operative can be established, and small pigs raised and sold to members at cost price.

It divides hog production into two specialized halves: the production of weanling pigs and the feeding of pigs. The hog feeder is no longer a hog breeder, and the breeder does no feeding.

The recently formed co-operative pig hatchery at Arborg is an excellent illustration of what can be done. It has not been operating long, but already there is a provisional board, a piggery, an operator and a manager, and hogs are being produced.

A WELL-PLANNED piggery is an important part of a hatchery plan. The barn at Arborg is divided into 33 pens. "It is a little too narrow," said operator E. Johnson. "Ideally, it should be 31 feet wide to give a little more alley space." There is a four-foot alley down the center, with pens on each side. The pens are eight feet wide and nine feet deep, with a four-foot cleaning alley at the back of each pen. An area is boarded off in one corner of the pen next to the center alley, and a heat lamp above this small enclosed area provides heat for small pigs.

No other artificial heat is provided in the building. It is expected that in the winter the body heat of the pigs and the radiation from the heat lamps will keep the building comfortable. The walls are insulated with four inches of wood shavings. Eight inches of shavings are used in the ceiling.

One or two additions are still to be made. A small room with a stove in it is to be built at one end of the barn. This will increase the comfort of the operator on cold nights when sows are farrowing. Forced air ventilation is to be installed.

The co-op does not own the building. It was being built by Mr. Johnson, and the co-op loaned him the money to complete it, and now rent from him. Six acres of sow pasture is adjacent to the buildings. More land is needed and will be acquired.

A provisional board is operating. "There never was a membership drive," says Sig Oddleifson, association secretary. "It should not be necessary to race all over the country to get people to join something that is for their own good." This system seems to be paying off. Already there are over 50 members who have paid a $1.00 membership fee, and made the mandatory loan of $25.00. It is doubtful if over 100 members could be provided with pigs, unless another building were erected, so it will be no problem to get enough members.

Anyone who wishes to join gets forms from Treasurer G. A. Hackey, manager of the Arborg Co-operative Store.

The co-op plans to have a breeding herd of 100 sows. They initially bought and bred about 20 sows. They have been buying regularly since that time. There is little purpose in buying the desired total at one time, as sows should farrow through the year. Purebred Yorkshires are bought though there is no intention of registering them, and no desire on the part of the co-operative to sell breeding stock. They do, however, want good quality pigs.

As in all operations, where a large number of animals are raised in a restricted area, disease is a constant threat. The small pigs are inoculated for septicemia at three days of age, and for erysipelas at one week and again at six weeks of age. Male pigs are castrated at six weeks.

The co-operative is beginning to offer pigs for sale. Marketing is no problem. "We could have sold more than 1,000 pigs this summer without even trying," said operator Johnson. There are quite a number of standing orders for ten pigs a month, and other feeders want varying numbers. Pigs are not sold to non-members but, as would be expected, there are many in this class who would like to buy large numbers.

"One man can handle 100 sows under this system, but he must have everything handy," stated Johnson. "The only thing that he really needs help for is giving the injections, castrating, and giving the little pigs iron. We put iron on the pigs' tongues at three days of age, and then once a week until they are about six weeks old. It is an awkward job to do alone."

"The main idea of this project," said Secretary Oddleifson, "was to get away from raising young pigs on the farm. Losses on the farm tend to be heavy, litters small, and the sows are a lot of trouble. The hatchery will take small pig production right off the farm, and it should iron out some problems."

THE pig hatchery at Morris, Manitoba, is owned by the Manitoba Pool Elevators. It was begun in the winter of 1949-50 by the Pool, with the idea that it would be taken over as a co-operative by local farmers as soon as it was operating satisfactorily. The flooding of the Red River in the spring of 1950 proved fatal to sows, small pigs and feed reserves, as well as to the plan to quickly change the hatchery into a co-operative. It is the hope of Fred Hamilton, who is in charge of the project for the Pool, that it will soon be taken over by a competent local co-operative board formed for the purpose.

No special building was put up for this hatchery. Two old barns on the farm of W. Fraser, south of Morris, were converted for use as hatchery pens. All that was done was to remove stalls and partitions and other paraphernalia, and put in pens eight feet by nine feet, with an alley against the walls. Like the Arborg barn, there (*Please turn to page* 54)

*These Yorkshire sows at the Morris hatchery have come in from the pasture for an evening feeding. The two barns have been converted to farrowing pens for sows.*

# BLUEBERRY ISLAND

***The cultivated blueberry crop pays high dividends on the extremely acid soil of Lulu Island in the delta of the Fraser***

*by* **P. M. ABEL**

*Ed Johnston and visitors stand in front of a mature plantation of highbush blueberries.*

*The packing shed on the Johnston farm. Pickers deliver at the counter where the figures are standing. Trucks haul from the opposite side of the building.*

THE economists have a phrase, "maximizing our resources." It is a big enough mouthful to scare ordinary people, but if you apply it to farming it simply means getting the most in food from a given amount of land, labor, seed, and other things which go into the making of a crop.

Well, out on Lulu Island they are maximizing their resources. And how! On a soil so sour as to have distinctly limited cropping possibilities, the locals have discovered that they have every requirement to grow blueberries. With almost no professional advice they have evolved a routine for growing this specialized crop which is annually bringing the older established growers up to $400 net an acre!

Before the dawn of recorded history the Fraser River has been rushing seaward bearing millions of tons of soil worn from its rocky bed. Enough of this was deposited at its mouth, where the current slows up a bit, to form a huge barricade. In some age-old season of heavy stream flow, the river burst through this barrier at both ends, leaving an island in the middle of the river. In the following centuries the Fraser has been busily depositing sediment on the edges of this island of its own making, thus building up a clay saucer. The center of the saucer became a steaming morass which grew sphagnum moss to the virtual exclusion of all other vegetation. When humans first saw Lulu Island its interior was one vast peat bog—40,000 acres of it, 11 feet deep at the bottom of the saucer.

*W. T. Suckling behind the handles of a mower of the type in use for keeping down grass in new plantations.*

Farming, as it is known to prairie dwellers, is quite out of the question on Lulu Island peat. Even after the land has been cleared of bush and brought under permanent cultivation the water table is impossibly high for ordinary field operations. In winter it comes to within three inches of the surface. But for the presence of drainage ditches movement across the land in the wet season would be impossible. In dry midsummer the water table never recedes more than 20 inches from the surface. On a dry mid-June day, in this driest of summers, this writer came out of cultivated blueberry fields with oozing shoes.

This high water table would sicken or drown most cultivated crops. Not so the highbush blueberry whose homeland is the sour marshes along the Atlantic seaboard. They can be made to grow on arable upland soils, but nowhere is there such luxuriant growth and heavy fruiting as one finds on the unfailing groundwater of this river island. The blueberry growers on Lulu Island don't worry about competition from outside.

IN 1923 there came to this boggy paradise one Ed Johnston, Herring-choker from St. Stephen, three generations removed from ancestors who wore the tartan. In those days Ed used to work as a hired man at High River, and adjacent Alberta towns, spending his winters at the coast "looking around" for whatever it is that men with Scots blood in their veins look around for. By 1928 he had found enough of it to stay permanently at the coast.

The last year before Ed burned his bridges behind him he read a magazine article about the newly commenced blueberry culture in the United States. He didn't do anything about it then, but two years later he sent away for a dozen trial plants which at that time cost $3.00 apiece.

Behind these trial plants there was a history of intensive scientific work. The botanists had noted that there were eight different native species of blueberry on this continent, varying considerably in habit of growth and size and quality of fruit. Fortunately the heaviest bearing, and the finest quality of large fruit was to be found among the highbush blueberries of New England, which this writer, as a boy, picked from a scow poled about the margin of hummocky Massachusetts marshes.

Crossing and selection was started about 1910 and some exceptional advance was soon made. One of the varieties, Jersey, which is still widely grown on Lulu Island, was among the new crosses available to Johnston at the time of his first purchase.

Blueberry farming requires a lot of faith from those who pioneer it, for bushes do not yield until they are six years old. And six years brought Johnston to the middle of a well-remembered depression when people were not expanding much of anything. In spite of it all, however, Ed Johnston persisted and with the first return of better times he perceived that he was in the money.

Today he has two brothers with him: Andrew superintends the packing shed while the ten weeks harvest is in progress; Bert drives the truck; and Ed himself is the salesman. A fourth partner is Mel McMorrin, a husband of Ed Johnston's neice. The farm has expanded to 40 acres, not the biggest on the island, but the one with the largest volume to market.

*R. F. Kinnon mans a rototiller of the type used to cultivate young blueberry plantations.*

IN their development of blueberry farming the Johnstons have tried every new variety as soon as it could be purchased. At the present time there are 35 varieties on the farm, ranging from Dixie, whose berry measures an inch across, down to varieties not much larger than the best that the squaws of New Ontario ship to the prairie markets. The main crop is Rubel, one of the earliest selections from the wild made on the New England farm of Reuben Leak, whence its name. While its fruit is only half an inch across, it makes up for its relatively smallness by the erect character of the bush, its vigorous growth, ease of picking and its excellence as a shipper and canner.

The Johnston lit the flame, but a powerful amount of torch bearing has been done by W. T. Suckling. An impressive man this Suckling, for all his advancing years. Originally from Truro, Nova Scotia, he wore the kilts of the Nova Scotia Highlanders in the first war. (*Please turn to page* 64)

*"The swan was on the slough," said Ronnie. "It was hurt and couldn't fly. Olga and I took the boat and got it."*

# THE WHITE SWAN

*by* **CLIFFORD E. SHELTON, author of Another Spring, Shadow of the Pine**

***Mary said, "A child looks at things differently. If he likes someone, nothing else matters." Bob had his own ideas of neighborliness and showed his displeasure at his son's going to the Strembitskys' to help care for the crippled white swan***

"A WHITE swan! Did you hear him, Mary? He says he's got a white swan!" There was a hint of raillery in Bob Mark's voice as he looked at his nine-year-old son across the supper table. His grin broadened as he said with rough good humor, "Sure it's not a mudhen, or a shoveller?"

The boy shook his head. A lock of reddish-gold hair fell across his forehead, and he brushed it back with quick, nervous fingers. He did not look at his father. In a voice, scarcely audible, he insisted, "It was a white swan."

Bob chuckled. "A white one, Mary. Did you hear him say—?"

"Yes, Bob. It was a white one. Will you have more potatoes, dear?"

Bob accepted the vegetable with sobered mien. He glanced at his wife. The little quirk of disapproval which he had come to know pulled down the corners of her pretty mouth. He speared the potato with his fork. "Confound the child," he thought. "Why can't he develop a sense of humor?"

The kitchen clock ticked across the chasm of silence. It was a blue clock, shaped like a dish and hung upon the wall, giving the large farm room a touch of intimacy which it otherwise lacked. Mary Mark remembered how proudly Bob had presented it on their first anniversary which she thought he had forgotten. "To get you up earlier in the morning," he had said, and in his arms she had laughed with him.

They had not laughed so often since Ronnie had come to them. She had prayed that their child would be a bond of their happiness, and a common joy for them to share; as yet, her prayer remained unanswered. He had been delicate since babyhood, and when rheumatic fever during his first year at school had robbed him of vitality and endurance, he could no longer go far into the fields or woods when the weather was damp. More and more he turned to his mother for understanding, while Bob did the things alone which he had dreamed of doing in the company of a sturdier son. And in another way they could not be together. Bob's rough good humor aroused no kindred feeling in Ronnie's sensitive nature, and Mary, who had formerly replied to his practical jocularity in kind, now turned it aside for the boy's sake.

She watched with a smile as Ronnie scraped the bottom of his dish, all the time with a fugitive eye upon his favorite dessert. Bob, tilting his chair, regarded them speculatively through the smoke of his after-supper cigarette, comparing them as he had done so many times before. The boy took after his mother. His blue eyes with their long eyelashes, his hair like the gold of sunset, and the soft curve of his cheek were hers. He even smiled the same way. Bob felt that nothing about the boy was like himself. There seemed nothing that he could do to reach the boy as his mother had done. He flicked the ash from his cigarette, and thought again of the swan. "Strange for it to be in these parts," he reflected. His curiosity overcame his reluctance to speak of it again, and he inquired, "Where did you get the swan, Ronnie?"

THE boy looked toward his mother. He wished now that he had not mentioned his white swan, but that he had kept the wonderful news for her alone in those few minutes after he had climbed into bed. But the news was so important, it had just popped out.

"Where was it, Ronnie?" prompted his mother.

"It was on the slough," he ventured. "It was hurt, and couldn't fly." Encouraged by his father's look of interest, he continued, "We took the boat and got it."

**Illustrated by Clarence Tillenius**

"You might've fallen in, Ronnie," his mother remonstrated.

"Oh, no. I couldn't fall. Olga was holding on to me." His eyes were shining with the memory.

"Olga?" questioned his father. The laughter lines about his mouth had disappeared.

"I wonder where it came from," Mary interposed quickly. "Could it have lost its way, Bob?"

"Probably from the city zoo. It's not far," Bob replied.

"It was so white and pretty," Ronnie declared. "It had a broken wing, but Olga's mother is going to fix it."

Bob crushed his cigarette. "Olga's mother—you weren't over there, were you?"

"I—I went to help carry our swan," the boy explained.

"You know I don't want you g o i n g there. They, why—"

"Please, Bob," Mary interceded.

"You're not to go again," he said gruffly.

The boy stared at his dessert through a mist of tears, but at his mother's gentle touch, brushed the lock of hair from his brow, and picked up his spoon. He ate without looking up, and there was a strained silence until the meal was finished.

Later, after the boy had gone upstairs to bed, Bob prepared for his evening chores. His brow was furrowed, and his rather full, handsome face sullen and resentful. He had not meant to speak to the boy so sharply, but disobedience with regard to visiting at Olga's home aroused him beyond measure. He banged the milk pails together. "Olga Strembitsky! I can't understand the boy taking up with people like that," he grumbled. He pulled on his denim jacket, jerked his cap to one side of his head.

Mary gathered the dishes briskly, and stacked them in a bowl in which water heated upon the range. "I don't see why you object," she said as she whisked away the crumbs. "They're neighbors, and Olga is a nice girl." She set back the chairs, and straightened the cover on the kitchen couch.

He hung the milk pails on his arm. "They're not neighborly," he argued. "They keep to themselves. We've nothing in common, and I don't want Ronnie going over there."

"The children don't see it the way you do, Bob. Especially Ronnie. And besides—"

"I can't see why he doesn't choose somebody else," he persisted. He put his hand on the door knob.

Mary wiped the dishes vigorously. She realized the necessity of explaining the boy's attitude, yet felt inadequate to do so. She said, "A child looks at things differently from a grown-up. If he likes someone, nothing else matters, and Ronnie likes Olga. Just because Strembitsky got in ahead of you at the tax sale, and bought the place over your bid doesn't make any difference to Ronnie. He hasn't any prejudice. That's—"

Bob cut in. "Strembitskys are all for themselves. They've fenced the lower meadow against my cows. I grazed cattle on that quarter years before they came out here, and should've had first chance at it."

"You waited too long, Bob. They wanted the place, and paid cash. That's all there is to it," she argued. "Anyways—it shouldn't affect Ronnie. You can't live his life for him, and shouldn't try. It won't hurt him to see Olga once in a while." She thrust wood into the stove (*Please turn to page* 88)

# "Mahnomen"

***Industrialization overtakes the wild rice crop, formerly mainstay of the Ojibway Indians***

by
**ANNA TILLENIUS**

*Above: Indians harvesting wild rice in the traditional way, gathering with one stick, and knocking out the kernels with the other. Right: Mr. Williams holding two typical plants.*

A GUN shot re-echoes across the bay and the wide expanse of lonely marsh suddenly becomes agitated with sinister looking lines of shaking reeds. From widely scattered points of the marsh these lines converge on the rocky beach as 20 brightly painted canoes, each poled by two swarthy Indians, shoot into open water and race toward the landing.

High up on a great granite rock overlooking the scene, leathery old Indian men, buxom squaws and black-eyed Indian girls dressed in their gaudy best, cheer and wave to the oncoming canoes, while dogs and children set up a din that reverberates throughout the clearing.

This is the exciting finish of the wild rice harvesting contest held in September each year at Williams' Wild Rice Camp at Lac du Bois, Manitoba. The winning team is determined on the total of these three points: quantity of rice picked in one hour, quality of the load, and the first team to reach shore. The record weight picked in one hour now stands at 106 pounds.

Today wild rice or "mahnomen" of the Ojibway tribes, retailing at $2.50 a pound ($108.00 per bushel), is the world's costliest cereal! Moreover, this native cereal, which from time immemorial sustained North America's aboriginal tribes and served as "iron rations" for explorer, trapper and missionary, has now become a featured dish at the Waldorf-Astoria and other high class hotels. Why?

The answer lies with an enterprising Canadian, Herbert Bedford Williams of Lac du Bois, Manitoba, who had the faith and foresight to invent and build modern machinery to harvest wild rice and who since 1917 has pioneered the processing and marketing of this little known Canadian cereal. In 1950, Williams harvested a $37,000 crop from his 500 acres of marsh land leased from the Manitoba government.

Wild rice is an aquatic plant found in marshes and shallow lakes with thick, rich bottoms. The plant grows from eight to 12 feet high, with a flower head of yellow and purple which ripens from the top. The level of the water in the lake or marsh is all important to the wild rice plant. From four inches to four feet in depth, no more, no less, for this plant, which is an annual, sends up from the seed in the spring a floating leaf which lies on the water and which is the plant's contact with the life-giving sun.

If the water level is increased to such an extent that this floating leaf is submerged then the crop for that year is a failure. However, wild rice has a crafty insurance scheme of its own which ensures that this hardy plant will not be eliminated. Many seeds lie dormant and do not germinate in the spring but are ready to begin life the following spring. Thus wild rice continues to grow in our marshes in spite of high water.

NEITHER the plow nor the hoe is needed for cultivating the rice beds. Nature sows, fertilizes and ripens the grain: man has only to reap—a crop ideally suited to wandering Indian tribes. When the seeds are ripe, they fall off into the water and sink point down into the soft mud. Wild rice is a gamble. The seed of the plant shatters very easily when it is mature. A continuous high wind during the first weeks of September when the rice is ready for harvesting is fatal to the rice crop.

Manitoba's wild rice fields, which are the finest in the world, are located between the 49th and 54th parallel, but only on the east side of Lake Winnipeg where conditions suit this fussy plant. Wild rice of inferior grade, is also harvested in northwestern Ontario, Minnesota and Wisconsin. Attempts to transplant wild rice to other lakes, notably for duck feed as carried out by Ducks Unlimited, have been successful where conditions are right. But if there is even a slight trace of alkalinity in the water, the plant sickens and dies. Transplanting wild rice on a large scale as a commercial venture has not yet met with any success.

For planting purposes the seed must never be allowed to dry out. As soon as the seed is gathered, it is placed in jute bags, not packed too tightly, and submerged in the lake until wanted. If the seed is to be shipped, it is drained for 24 hours before it begins its journey. As soon as the seed is received it must be immersed in water and any seeds that float should be thrown away. Seed to be sown in a marsh is simply broadcast from a boat or canoe, about ten to 20 pounds of seed per acre.

THE Harvest of Mahnomen or wild rice was for the Indian tribes a solemn ceremony followed by feasting. Before the harvest, an offering of tobacco is made to Sekatcokemau, a subterranean being whom the Indians supposed to have given them the wild rice. Then the medicine man makes a sign that the Harvest of Mahnomen may begin.

Eagerly the Indians leap to their canoes and push off onto the lake. As one Indian poles the canoe through the water, the other deftly bends the tall slender grass-like stems over the side of the canoe with a small stick and (*Please turn to page* 62)

[Photos by Ducks Unlimited.

*Squaws parching wild rice in metal troughs.*

*Dancing the rice in concrete tubs.*

# The Parson's New Church

by KERRY WOOD

***The Willowdale team needed a spare pitcher and Reverend Tanner yielded to the coaxing for him to join in a game. He remembered his fight for church funds and put plenty of fight into pitching***

*"Go ahead, Pop," urged Morton, "Pitch 'im your steamer!"*

"NO!" snapped the Widow Meegan. "Not another cent!" Prentice G. Tanner hated begging for church funds, but this time his jaw had a stubborn thrust to it as he tackled Willowdale's wealthiest citizen one summer evening.

"No!" she repeated, rising from her porch chair with every one of her several chins set just as firmly as the young minister's jaw. "And you can't call me mean, either. You know very well that I've twice before given you thumping big donations for that new church building."

"The money got side-tracked." Tanner tried to sound patient, as he took his hat from her thrusting hand. "The congregation voted to give all our first savings to that emergency flood relief. Then, when the mill fire burned out three families, the second fund provided them with new homes. You voted in favor, too, and I'm proud we acted as we did with that money. But this time, we simply must have a new building. It's the oldest church in town, much too small for our congregation. It has no basement nor hall for general meetings, no Sunday school room, nor any place where young folk can hold socials."

"You said all that before," Mrs. Meegan reminded him, bustling down the cement walk. "I don't want to miss the ball game, so if you want to do any more talking, do it while I walk to the Town Square."

"Well, I'd like to review—"

"You've already reviewed," interjected the Widow. "I agree we need a new church. My suggestion is that you have the women hold Saturday afternoon teas, sales of home cooking, and so on. Then we'll earn the church and appreciate it all the more when we get it."

Reverend Tanner tried to control his annoyance. "It would take another 20 years to raise the money that way, in a small town like Willowdale. Most of our supporters have low incomes and can't afford large donations."

"Well, I don't approve of unearned handouts," Mrs. Meegan retorted, accelerating her pace as she heard a cheer from the Square. "Oh, drat—Why did you come tonight, of all times? I did so want to see this Vicksburg-Willowdale game, and it must be half over by now."

"I wanted to see it too," the minister muttered, then raised his voice: "If you'd just remember how your late husband felt about us having a new church—"

"No!" cried the lady, beginning to puff.

"I'm not asking for a finished building," Tanner pleaded. "If the raw materials can be bought, I'll be glad to build the church with my own hands."

He unconsciously flexed his lean, hard muscles while reviewing again the price of lumber, of cement, bricks, windows and doors. It all added up to several thousand dollars more than his congregation could afford, while this one person could easily spare the whole total and more.

"Think of the young people," the minister said, just as they reached the Square.

"I am thinking of the young people!" replied Mrs. Meegan. "I've been thinking of them all evening, wanting to come here and watch them play ball. And now that I'm here, that's what I intend to do!"

With that, she turned at a tangent and pushed through the fringe of the crowd, leaving the minister to stare gloomily after her and realize how dismally he had failed.

"Hi, Pop!" greeted a youthful voice.

REVEREND TANNER came out of his despairing blues to see his son, Morton, blandishing a catcher's mitt five sizes too large for his ten-year-old hand.

"Hello, son. How's the game going?"

"Aw, we're sunk," mourned Morton. "Vicksburg piled up seven runs to our three. It's the last half o' the seventh inning, an' we're at bat."

"It could still be anybody's ball game," said the minister, automatically snapping up a hand to catch the ball that young Morton threw at him.

"Not a chance—there's two batters out a' ready," Morton sounded depressed over the game's fate. "Hey, Pop: soak one in, huh? I got Dooley Harper's mitt on, so let 'er rip!"

**Illustrated by Clarence Tillenius**

"Oh, that's you behind all that leather, is it?" smiled the parson, and he took a step backward while fingering the ball into position. "Hold it where you want it, son."

Morton hunched down in approved catcher's style, bracing himself sturdily and fanning the mitt wide open. The minister executed a couple of hops while his right arm whirled, his whole body suddenly leaning into that straightening arm as the ball streaked away. There sounded a bullet-like smack, then Morton fell over backwards.

"Wow! Gee, Pop! That stung like a teacher's strap! Clear through Dooley's big mitt, too."

"I'm sorry, son," apologized the father. "I keep forgetting your small size."

"Then try me for size," interjected Dooley Harper, grinning at the minister. "That pitch looked super, Reverend. Gimme the mitt, Morton—Now, then, sir: pelt me a whizzer like that."

The ball flicked out and once again Reverend Tanner automatically caught it. He saw that Dooley had been joined by Cap Riley of the Willowdale team, attracted by the solid smack of that fast ball. Some people on the edge of the crowd had turned from watching the game, staring at the black-suited clergyman who was fingering the baseball and looking embarrassed.

"Really, now—" demurred the minister.

"Go ahead, Pop," urged Morton. "Pitch 'im your steamer!"

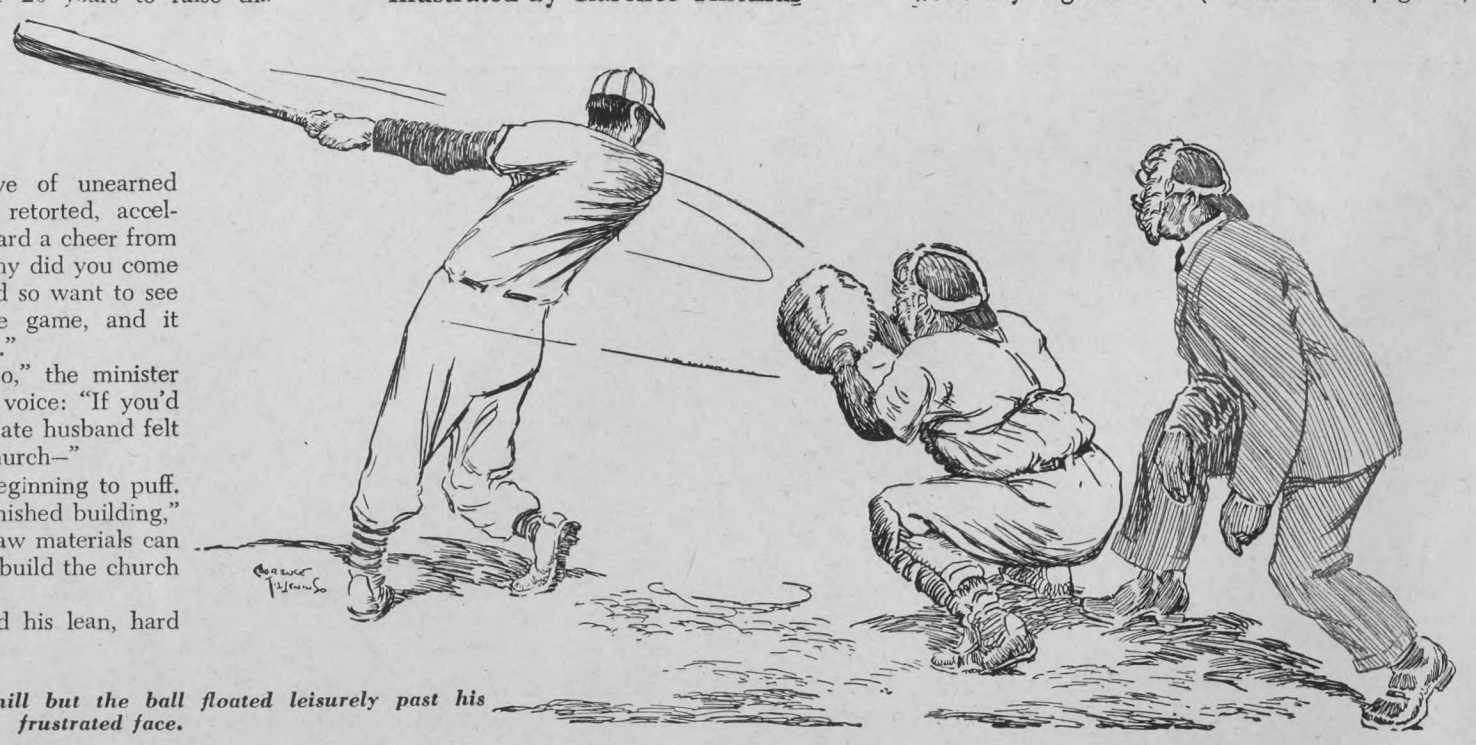
PRENTICE G. TANNER knew that this wasn't the proper behavior for a cleric, but he was still worked up over his quarrel with the Widow Meegan. He'd got rid of some of his pent-up fury by throwing that first fast ball to young Morton. So he smiled down at his son and nodded. He suddenly made his two absurd hops, his right arm flashing out. The ball became a blur, then lammed into the pocket of the catcher's mitt.

"Ouch!" yelped Dooley, his eyes popping. "Jumpin' jellyfish! Say that stung! That's the fastest ball I ever caught—Hey, where'd you learn that kind o' pitching, Reverend?"

"My Pop was a champeen pitcher at college," Morton reported, enormously proud of his father. "Me and him, we practice catchin' and pitchin' every day, out behind the house. But I can't hold 'im when he cuts loose."

Cap Riley heard a groan go up from the crowd and knew that Jimmy Todd had fanned out. The Cap was Willowdale's only pitcher, also the team's captain. And Cap Riley was noted for his hunches, so perhaps that was why he suddenly advanced on the minister.

"Look, Parson: we need a spare pitcher in the worst way. I got me a (*Please turn to page* 58)



*Jeff struck like a windmill but the ball floated leisurely past his frustrated face.*

# Man-of-Good-Heart

***Father Lacombe enjoyed the fullest confidence of red men and white, and his influence was a major factor in the comparatively peaceful settlement of the Canadian West***

*by* **IRIS ALLAN** *and* **NAN SHIPLEY**

EIGHT miles from the ever-expanding city of Edmonton, and overlooking a valley fringed with oil derricks, stands one of Canada's most important historical sites. Here, 90 years ago, on a high hill, Father Lacombe erected the first Catholic Mission west of St. Boniface. But because this little black log hut is now enclosed by a fine red brick shelter to preserve the old building, motorists and travellers pass by unaware of the treasure.

Here may be seen the mitre and crozier, carved with an Indian hunting knife from a spruce tree and tinted with yellow ochre, that Father Lacombe fashioned for a visiting bishop. Here, too, pictures made with colored sandstone, batiche chairs, and the Canadian Pacific Railway's pass Van Horne sent to Lacombe "as a little charm against conductors," and dozens of other items important to Canadian history.

Born near Montreal in 1827, Albert Lacombe came West in his early twenties. At Pembina he found shelter in an elderly priest's hut, and this old gentleman with true western hospitality offered Lacombe the use of his bed.

"But that's a coffin!"

"Yes. It was built for a half-breed and then found to be too short. I have found it very useful—much better than just blankets on the ground."

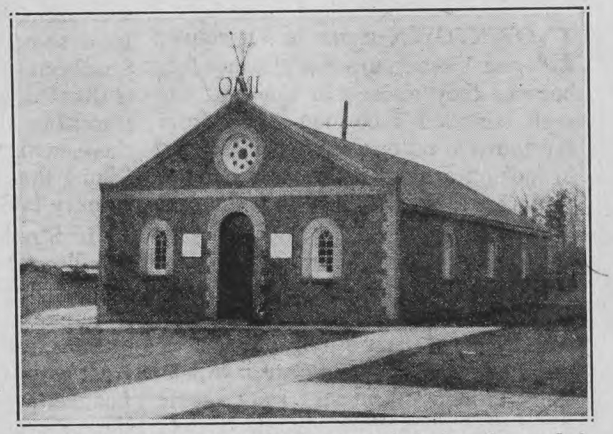
Father Lacombe left St. Boniface during the flood of 1852, travelling with a Hudson's Bay brigade, via Lake Winnipeg into the Saskatchewan River. On this trip he met Factor Rowand, one of the West's most colorful characters stationed at Fort Edmonton. Although there was a gap of 25 years in the ages of the two men, and both possessed quick, fiery tempers, they became the best of friends. "He was a great little man," Lacombe often remarked fondly. "But like a can of gunpowder too, and he was always impressing upon me the Company's monopoly of the fur trade."

On one occasion when Lacombe trimmed his coat with a couple of otter skins (given to him by an Indian who had trapped out of season and could not dispose of them, Rowand flew into a rage at the sight of it. "You say that you come here to teach what is right and this is the example you give! Who gave you the right to wear that fur?"

Father Lacombe tore off the furs and flung them in disgust at the Factor's feet. But the tiff was soon over and made no rift in their friendship, and the priest continued to live in the small cabin that Rowand had provided for his use that winter.

IT was in 1861 that he built the mission eight miles from Edmonton on the Sturgeon River, and named it St. Albert, after his patron saint. A sturdy little log building it stands today 16 by 30 feet in size, almost 100 years later, safeguarded for future generations by its red brick shell.

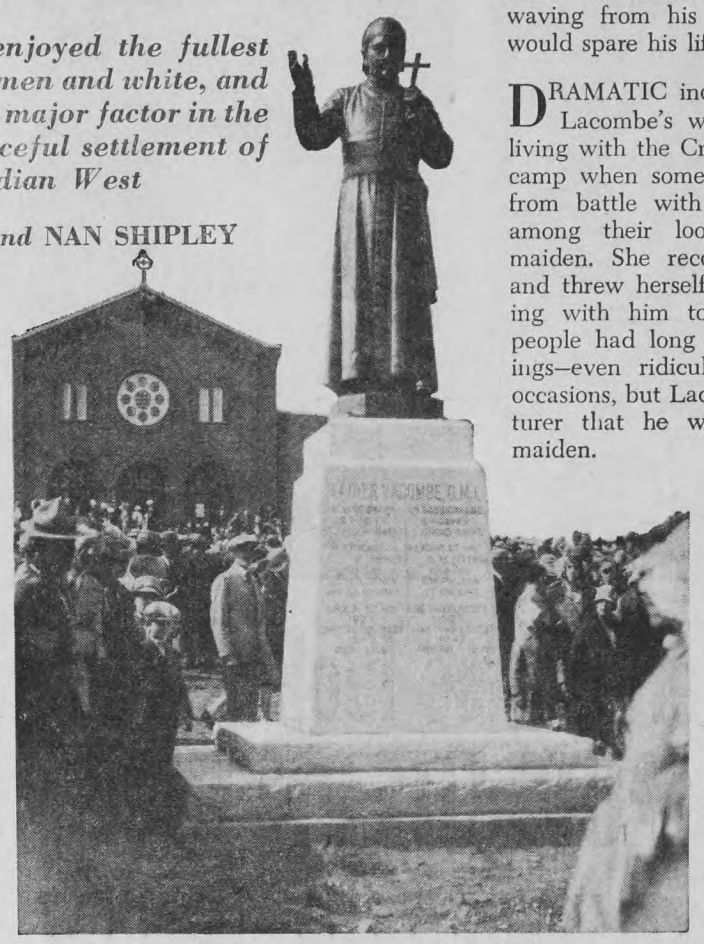
It was here, too, that Lacombe built a bridge of logs, similar to a wooden sidewalk, saying that he was tired of swimming his pony across or using a scow. He announced that anyone who did not help with the work would not be permitted the use of the bridge, and the next morning the whole settlement turned out, and at its completion raced back and forth in sheer delight.



*This brick structure is built around Father Lacombe's first church to preserve the old log building.*

This was the first bridge erected in the whole North-West Territories and aroused the ire of the Governor of the trading company when he first saw what he called—"A contrivance to hasten the advance of civilization." He ordered it destroyed. Yet it stood, with the occasional log renewed until 1900, and was then replaced by the present modern steel structure.

Once Lacombe had his mission and his bridge almost 1,000 half breeds and Metis settled at St. Albert, and he looked about for means of making the little village independent of the fort at Edmonton. He built a plow and won the distinction of being the first man to guide a plowshare through the fertile soil of Alberta. The first grain crops were highly successful, and since no flour mill existed the grain was fed to the animals, and the vegetables "were sufficient to supply a city."



*The statue of Father Lacombe now standing in St. Albert.*

He taught the people agriculture and wrote to Archbishop Tache at St. Boniface requesting that he purchase a flour mill. A dismantled mill was shipped up from Chicago and across the plains by oxcart, and undaunted by the fact that neither he nor his parishioners knew anything about the mechanism of such a new fangled contraption, Father Lacombe boldly put the pieces together and trained native ponies to furnish the power.

He was making rapid agricultural strides now and organized the first brigade of carts from St. Albert to Fort Garry for supplies. Before this, the long, hard pull along the Saskatchewan River and through Lake Winnipeg to the Red River settlement had been the accepted route. After the priest's successful journey the trading company established a similar freighting service, that proved to be a distinct improvement over the old waterways route.

It has been said that one thing more than any other may have accounted for Father Lacombe's outstanding success with the prairie Indians, and that was the fact that one of his maternal grandmothers had been captured by an Ojibway chieftain and bore him two sons before she was rescued by her uncle. There is no doubt that whenever he repeated this story about the native campfires he was assured of a ready audience and succeeded in capturing the Indians' imagination. Great as his triumph was in building a self-supporting settlement in the West at that time, his greatest interest lay in visiting the nomad Indian camps, and for 20 years he lived their hard but carefree life sharing the leisurely, abundant weeks of summer and the long, near-starvation months of winter.

Father Lacombe was the only man—native, white or of mixed blood—who could wander from one hostile tribe to another without suspicion, and was often caught in the midst of their tribal wars. So concerned were the Indians for his safety that a Blackfoot Chief begged the priest to make a flag—a large red cross set on a white background—and whenever the Indians saw the flag waving from his teepee pole they would spare his life.

DRAMATIC incidents highlighted Lacombe's whole life. He was living with the Crees at their winter camp when some warriors returned from battle with the Sarcees, and among their loot was a captive maiden. She recognized the priest and threw herself at his feet pleading with him to rescue her. Her people had long resisted his teachings—even ridiculed him on many occasions, but Lacombe told her capturer that he wished to buy the maiden.

The brave laughed — "You Blackrobes say you do not want women. She is mine."

Lacombe gave a horse, a new coat and shirt, some tea and tobacco in exchange for the Indian girl, and to ensure her safekeeping he took her to the nuns at the little convent at St. Albert for the snow-white garments and the long black hair of the stolen girl showed that she was no ordinary Indian maiden.

By spring the priest was ready to stage his little coup, and with his faithful guide and the man's wife, set out with the Sarcee captive to find her people. As soon as the maiden's sharp eyes caught sight of her tribe's camping grounds in the distance, Lacombe bade her remain in her teepee until he called her, then with folded hands he sat down at his own campfire to await the visit he knew would come now that his guide had unfurled the well-known red-cross flag.

The cut hair and the black-painted faces of the riders as they approached were signs well known to Father Lacombe and he asked the Sarcees why they were in mourning. They answered for the daughter of their chief whom the Crees had stolen six moons ago. With a fine flourish the priest beckoned to the braves to follow him, then at the entrance of the maiden's teepee he called to her to come out.

From that moment the tribe acclaimed him all-powerful and fell willingly under the spell of his teachings.

He had many close brushes with death. Once while camping with the Blackfeet the Cree attacked at night and he was wounded in the shoulder and knocked unconscious in the confusion. When the Blackfeet shouted out that their enemy had killed the priest the Crees were so alarmed that they retreated immediately.

He was also aboard the riverboat the "Swallow" when it was sunk during a gale on the Red River. One of the passengers was towing his York boat behind the steamer and all were saved when they jumped into the smaller craft. But Father Lacombe bemoaned the loss of his "portable chapel" which he carried with him on all journeys. Later, however, the "Swallow" was reclaimed and the little "chapel" too.

(*Please turn to page* 63)

# Unbroken Heat Broils B.C.

***Drought cuts income and shortens tempers as may be seen by controversies that have broken out over public policies***

*by* CHAS. L. SHAW

THE past summer, which was ideal for vacationists, tourists, campers and the city folks who much prefer the sunshine to the rain, cost British Columbia a good many millions of dollars. It was, indeed, a costly luxury and its full effect on the province's economy probably will not be felt until the coming months.

In this column last month it was remarked that the long dry period would surely have run its course by the time the report appeared in print, but apparently this was written in an excess of optimism—or pessimism, according to the point of view, because here it is a whole month later and the drought is still with us. Under the circumstances no forecast will be offered now as to what the weather may be like from now on.

As week after week of warm, dry weather continued, the anxiety of people who depend for their living on the fruits of the field and forest rose. Never before in history has such a prolonged period of drought prevailed along the west coast, and while that region may have been the envy of people in Alberta as they battled with hail storms and of fog weary denizens of San Francisco, the experience of loggers and farmers in British Columbia has been anything but happy. Because of the tinder dry nature of the forests, scores of logging camps have been closed for months and some loggers are complaining that they have been able to work only half a season.

As for the farmers they have been faced with ruin of several crops and in the Fraser Valley alone they were counting their loss in the millions by mid-August. Not since the great flood of three years ago has that district suffered such difficulties. But the farmers will be able to salvage some of this loss, and they have had work to do throughout the season. With the loggers the predicament has been sadder because they have been forced into idleness at a time when production in the woods should be at its peak, and with markets everywhere crying out for lumber, pulp and other wood products.

DOWNTOWN stores in Vancouver and Victoria are complaining too, because they claim that the long dry spell curtailed shopping. Apart from the tourists, no one seemed interested in looking around in the merchandise emporiums. It was just too hot and wearying.

The weather seemed to get on many people's nerves and what might have been minor controversies under normal circumstances flared into bitter acrimony. Even news of industrial expansion brought protests from some quarters. Critics wrote angry letters to the papers because of the trend toward concentration of ownership of the province's forest wealth, as exemplified by recent mergers and large purchases by companies already in the jumbo size. Touring legislators trying to search the grassroots for honest opinions concerning the government's experiment in hospital insurance, encountered hostility almost everywhere, although that was getting to be an old story. And over on Vancouver Island, when the British Columbia Power Commission prepared to go ahead with the damming of Buttle Lake to produce more waterpower for the area's rising industry a storm of opposition broke. There was a similar outcry when the Greater Vancouver Water Commission announced plans for a dam on the Capilano to ensure adequate water storage for the city's growing population. All these outbursts reflected the mood.

In a sense the events of the past few years—the growth of the province and the rise of industry based on natural wealth—are now having a cumulative effect on many British Columbians who nostalgically dread the inevitable intrusion on the region's original glory. British Columbians like to see things go ahead; they urge the government to spend money for all sorts of social and other advantages and take pride in their high standard of living which these have brought about. But they also are proud of their province as a natural domain of forest and scenic grandeur. They are beginning to discover that they cannot always have both. If the lumber and pulp industry must prosper, the trees must fall; if more hydro-electric energy is needed, the lakes and rivers must be harnessed. The discovery hasn't been a happy one in every case.

IN the past few months British Columbia has had several major controversies over the so called exploitation of power resources. The first, of course, was the Aluminum Co. of Canada's multimillion-dollar project which will dam the Nechako Lake system—an undertaking which involved encroachment on Strathcona Park. However, everyone seems satisfied now that the gains will far outweigh the losses. Not only will a new industry flourish in what has always been wilderness with a busy new community, but the water storage scheme that is a part of the over-all plan may prevent recurrence of destructive floods on the Fraser, one of whose tributaries is the Nechako.

But the Nechako country is a long way from the centers of population. In a somewhat different category is Strathcona Park in which Buttle Lake is situated, and it was therefore understandable that hydro development there, with resultant ruin of the sport fishing that has made the surrounding country famous, should draw fire.

"If Strathcona Park is desecrated, it will establish a precedent for violation of British Columbia's great plan of public parks," declared Hon. Harry Stevens, president of the newly formed Natural Resources Conservation League, at a recent public hearing on the Power Commission's plan at Courtenay, and this utterance expressed the viewpoint not only of thousands of sportsmen but of a great many rank and file British Columbians who cannot become accustomed to the march of industry into the province's great unspoiled areas. Whether or not Mr. Stevens and his followers and coworkers are fighting a battle doomed to defeat remains to be seen, but it is obvious that every inch of the way will be contested as the frontier recedes.

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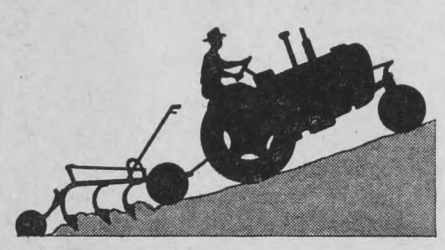
Four-wheel, high-clearance "DC-4" available as shown or can be converted from the Model "DC" at moderate cost.

Have you been behind in your work all summer because of wet fields, lack of power, not enough help? Get the jump on tomorrow's work *today* by making sure you'll have the lugging power and traction to push right through tough spots . . . the pulling power to whip big jobs fast . . . the extra speed that makes one man's time cover extra acres every day. See the fast 3-plow "DC" Case Tractor that's pulled many a farmer out of tight places—helped him stay ahead of his work. Get a demonstration. Drive it yourself. You'll find it puts new pleasure and profit in farming.

## Ask for Demonstration of All This



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When throttled down, or slowed by a hard pull, the Case "DC" Engine does not falter. Instead, it pulls stronger—keeps right on going through many a tough spot where you would likely be stuck if you stopped. You save lots of gear shifting, lots of time and effort.

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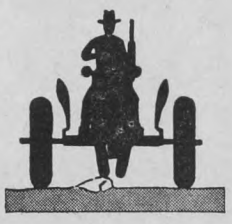
*SAVES HANDS, AVOIDS FATIGUE*

Case irreversible steering stops the jerks and jolts from rocks and rough ground. You don't fight the wheel to climb ridges and cross furrows. Case steering stays snug. Triple-life steering gear works in warm transmission oil, for easy action and constant lubrication without attention.



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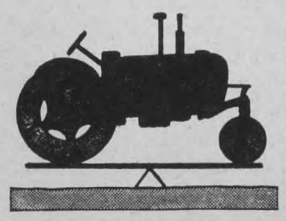
*SPARES THE CROPS*

Case front-mounted cultivator gangs are close to front wheels—they go where you steer, *when* you steer. Case Variable-Ratio Steering gives extra fast dodge when going ahead, extra leverage when making short turns. Four rows or two rows, you find it easy to cultivate close, clean and fast.



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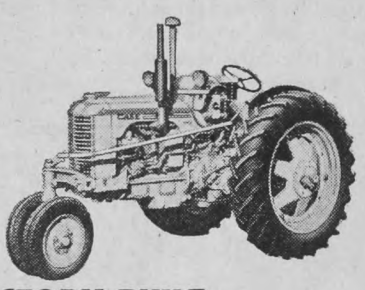
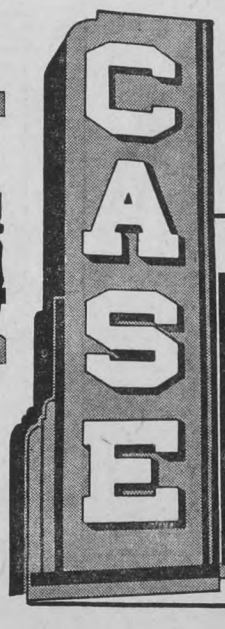
Compact Case construction puts weight to work where it is needed—mainly on rear wheels when needed for traction with heavy drawbar loads, plenty on front wheels when wanted for quick, positive steering. Tires wear less, fuel goes further, work goes faster.



### FACTORY-BUILT TO BURN LP Gas

As shown here, Model "DC" . . . like the mighty 4-5 plow Model "LA" . . . can now be ordered equipped for LP (butane-propane) fuels. Besides a full line of implements, there are 25 models of Case tractors. They include the big bargain in farm power and utility—the 2-plow "VA" Series with one-minute Eagle Hitch for Latch-On rear-mounted implements, and the larger 2-plow "S" Series.

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Case builds a full line of farm machines. Mark in squares or write in margin any that interest you; mail today to J. I. Case Co., Dept. CG-9, Calgary, Regina, Saskatoon, Edmonton, Winnipeg or Toronto.

☐3-plow "D" Series Tractors
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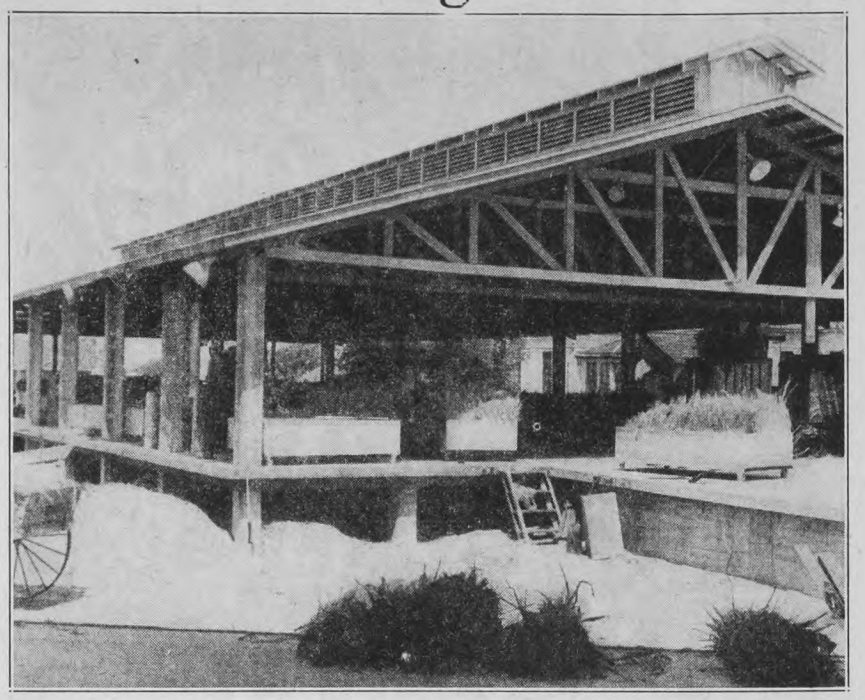
# News of Agriculture



*This new dryer for Texas broomcorn will dry 12 tons in four hours, instead of several days and adds up to $100 per ton to its market value.*

### *Trade across the Border*

THE average Canadian buys more than ten times as much food and feed from the United States as the average American buys from Canada. We sell beef cattle, beef, pork, canned or prepared meat, potatoes, alfalfa and clover seed, barley, rye and oats for fodder and feed, such fruits as apples, raspberries and strawberries, and other agricultural products such as hides and skins; maple sugar, sausage casings, poultry and eggs, dairy products wool, and glue stock. On the other hand, we buy from the United States cotton and linens, citrus fruits and juices, corn, rice, fresh vegetables, vegetable oils, oil seeds such as soybeans and peanuts, hides and skins, nuts, field and garden seeds, tobacco, lard and soybean oilcake for feed.

The United States Department of Agriculture has recently published a 12-page publication setting forth the value of this two-way trade in agricultural products between the two countries, and points out many ways in which the farmers of the United States and Canada have helped to solve mutual farming problems by working together.

### *Electrically Charged Dusts*

AT the Michigan State Agricultural College, a new method of dusting crops with electrically charged dusts has been found to give better distribution of the dust.

The dust particles are charged with from 12,000 to 20,000 volts at very low wattage, as they come from a nozzle of the regular commercial dusting machine. Power consumption is said to be low, and the apparatus safer, than an approved electric fence. A four-row duster is served by a tractor battery system, along with a dynamomoter. The high-voltage direct current power is applied. The high charge of the particles is held for several seconds, so that the dusts, which are blown at about a mile a minute, can travel a considerable distance before losing their electrical charge. Plants develop the opposite charge and thus attract the charged particles. As a result, the undersides of leaves and the sides of the plant opposite the dust stream, attract the particles and give what is said to be excellent over-all coverage.

Laboratory tests showed that plants at four feet away carried 11 times as much dust as when the dust particles were not charged.

### *Selling Dairy Products*

LAST year, Canadian dairy farmers set aside more than $300,000 in the month of June, as support for a campaign to increase the demand for dairy products. This fund is administered by The Dairy Farmers of Canada. The money was expended in literature and in advertising in more than 393 periodicals, in addition to 12 radio stations. These carried 3,322 radio spot announcements, 126 ten-minute broadcasts, and more than 3,700 advertisements. The money also helped pay for merchandising research and for a tested dairy recipe service.

The set-aside will also be continued this year, and it is proposed that September advertising should deal with fluid milk sales, especially for school children; October, cheese; November general promotion of dairy foods and winter meals; December, butter; January, fluid milk; February, evaporated milk; March, cheese; April, butter and milk powder; May, ice cream; and June, dairy food related to summer meals.

### *Milk Vending Machines*

THE School of Nutrition at Cornell University has been experimenting with milk vending machines as a means of increasing milk consumption and competing with pop of all kinds.

The idea is to have milk available at more places and times, and at a low temperature. Four machines have been used to study the relative demand for plain milk, chocolate milk and buttermilk, as well as the effect of price on sales, and the time of day when most sales would be made. More than 9,000 half-pint bottles were sold from two machines in separate buildings on the Cornell campus. Chocolate milk outsells plain milk three to one, at ten cents per half-pint. When plain milk was dropped to five cents, about the same amount of each kind was sold. Heaviest

# WHO SAID!... YOU CAN'T HEAT YOUR HOME FOR $98.00

## ...THOUSANDS DO

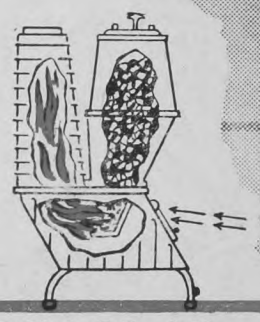
Yes, thousands of Booker owners in Western Canada heat their homes comfortably all winter long for less than $100.00, saving up to 50% of their fuel bills. These Booker owners enjoy controlled, automatic heating comfort at very low cost—because the Booker Self Feed Soft Coal Burner requires about 10 tons of coal at appr. $9.80 per ton to heat the average six-room house. **ASK ANY BOOKER USER!**

**ONLY THE SELF FEED PATENTED BOOKER CAN BURN THE LOW PRICED ALBERTA AND SASKATCHEWAN COALS WITH 93% EFFICIENCY . . . NOTHING WASTED - IT EVEN BURNS THE SMOKE**

## Here's How

This cross section shows how the Booker, through proper mixing of air and coal gas, extracts all the heat units from lignite and sub-bituminous coals. The coal is fed by gravity action into the cast iron fire box, while primary air from the front draft and secondary air through the slotted bar is drawn through the live coals.

Positive control and complete combustion results in all heat value being extracted from coal leaving only a small amount of inert, exhausted ash.



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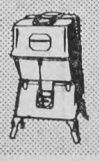
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sales are in mid-morning and mid-afternoon. Plain milk outsells chocolate milk at mealtimes. On the University campus and in one large office building, it is reported that where a milk vendor stands beside the soft-drink machine, the milk is winning out.

### *U.S. Farm Costs Up Too*

IN 1933, U.S. farms incurred expenses amounting to $4.3 billions, of which farm wages amount to $368 millions. In 1948, the peak year, expenses amounted to $18.5 billions, and farm wages to $2.1 billions. At the same time, realized net income of all persons on farms, increased from $3 billions to $18.6 billions, and gross farm income from $7 billions to $35 billions.

In the same period the total population of the United States increased from 125,223,000 to 145,426,000, while the farm population decreased from 32,033,000 to 27,440,000. The comparison between population figures and farm income figures permits a calculation of per capita net income. Thus, the per capita net income of the total population in U.S. increased from 1933 to 1948 from $334 to $1,425; of the non-farm population, from $470 (1934) to $1,551; and of the farm population from all sources, from $151 per capita in 1934 to $884 in 1948. A final figure on the per capita net income of the farm population from farming operations only, shows an increase from $90 per capita in 1933 to $691 in 1948. None of the figures so far used include any government payments. Average per capita government payments have ranged from $3 per capita in 1933 to a high of $28 per capita in 1944. During a 17-year period they were above $10 per capita or more in six years, over $10 and under $20 in four years, and over $20 per capita in the remaining seven years.

### *Trees Made to Order*

IN another 50 or 100 years, travellers across the Canadian prairies and the northern plains of the U.S., may perhaps see whole forests of merchantable trees growing where nature hadn't got around to putting them. Scientists have now begun to produce hybrid trees—in other words, to go nature one better, and to evolve trees which will grow faster, withstand more drought, and resist more insects and diseases.

Since 1940, in the United States, 12 new varieties of pine trees have been produced. Of the 90 different species of pine known to botanists, 64 species are growing at the Institute of Forest Genetics, U.S. Forest Service, Tracerville, California.

The tree geneticists are working for rapid growth and, according to Science News Letter, a cross between the poorly formed jack pine and the straight-growing lodge-pole pine, a new type is produced as straight as the lodge-pole, but with 88 per cent faster growth at ten years of age. A cross between the knobcone pine and the Monterey pine combines rapid growth with drought-resistant ability. An experimental tree is reported from a Ponderosa-Apache cross which had a root system which was already three feet into the soil, though the baby tree stood only a couple of inches high.

Many countries are now interested in producing hybrid trees. Canada is working to produce hybrid pines for lumber and poplar for pulp.

### *1950 Big Meat Year*

DESPITE decreases in the actual quantity of beef, veal and lamb produced and marketed in 1950, the Dominion Bureau of Statistics estimated the gross value of sales of all variety of meat last year at $650 million, or an increase of 16 per cent over 1949.

The output of beef at 617,400,000 pounds was down 10.3 per cent. Veal at 90,200,000 pounds was down 3.8 per cent; and mutton and lamb at 23,100,000 pounds was down 19 per cent. A total of 713,300,000 pounds pork, or an increase of six per cent was sold last year. There were 433,-168 head of cattle exported, which was 11 per cent more than 1949, and exceeded in number only by the years 1919 and 1948. Practically all of the cattle went to the United States.

The per capita consumption of meat in Canada amounted to 134.1 pounds or 4.4 less than in 1949.

### *Recent Appointments*

FIVE appointments have recently been made to the staff of the new School of Agriculture at Fairview, Alberta. Miss Lila Engberg, for the past two years instructress in cooking and nutrition at the School of Agriculture, Vermilion, will become the dietitian at Fairview. Vernon Osbaldeston, of Fort Saskatchewan, and a graduate in agricultural engineering from the University of Saskatchewan, has become instructor in farm mechanics. Donald Russell is being transferred from the Provincial Horticultural Station at Brooks, to Fairview, as instructor in horticulture and botany. Instructor in farm buildings is W. R. Knight, who has for four years been employed by the Department of Public Works at Vermilion. Donald MacPherson, Delia, became instructor in animal husbandry May 15. He is a graduate of the University of Alberta, and has been an instructor at the School of Agriculture, Vermilion, for two years, and instructor in animal husbandry at the Olds School of Agriculture for one year.

* * *

RECENT appointments in the Saskatchewan Department of Agriculture include E. W. McKenzie, as supervisor of visual aids in the Agricultural Representatives Branch. Mr. McKenzie has been agricultural representative at Melville for the past five years. S. Sheard has been appointed horticultural representative in the department, following graduation from the University of Saskatchewan this year. T. V. Beck, born at Mawer, Saskatchewan, and a Master of Science graduate this year from the University of Saskatchewan, will become weed specialist in the Field Crops Division of the Department. C. W. Larsen, who holds degrees in agriculture and commerce from the University of Saskatchewan, is the new agricultural representative at Assiniboia. E. N. R. Johnson, a Master of Science graduate in agriculture at the University of Saskatchewan this year, will be the new agricultural representative at Maidstone; and G. C Casswell, another Master of Science graduate this year from Saskatoon, will succeed E. W. McKenzie at Melville.

# Get It at a Glance

***Short items of interest from here and there***

UP to the middle of July, Canada was short by 843,000 metric tons on her deliveries of guaranteed quantities under the International Wheat Agreement. Our guaranteed quantity during the crop year 1951-52 will increase from 6,030,757 to 6,247,757 metric tons.

* * *

THE number of farms in the United States in 1950 was 5,379,043, a reduction of 480,126 from the number reported in 1945. A decrease of about 200,000 is attributed to a change in the definition of a farm used by the Bureau of the Census.

* * *

A BRITISH Jersey cow, Moors Pacified Diana, bred by her owner, Professor R. W. Wheldon, recently secured three world records in one lactation. In addition to yielding 21,741 pounds of milk in 305 days, she has the Jersey world record for daily output (120 pounds) and for weekly output (761.25 pounds). She weighs 812 pounds, is eight years old, has given her weight in milk in less than 12 days, 26 times her weight in 305 days, and 38.5 tons of milk with five calves.

* * *

IT is reported that the U.S. farm organizations are working to secure price supports for basic agricultural commodities equal to 100 per cent of parity; and to have the price ceiling for these commodities established at 110 per cent of parity under the price control system slowly being worked out.

* * *

OF the total output of the slaughtering and meat-packing industry in Canada for 1949, valued at $697,950,030, Ontario accounted for 38 per cent, Quebec for 21 per cent, Manitoba 15 per cent, Alberta 12.5 per cent, British Columbia seven per cent, Saskatchewan 4.5 per cent, and the Atlantic provinces two per cent. The most important single items of output, in order of their dollar value, were fresh and frozen beef, fresh and frozen pork, bacon and sides, and shortening. The cost value of all animals slaughtered was $480,609,215.

* * *

OF Scotland's 4.4 million acres of land under all crops and grass, 1.79 million acres are in cultivated crops; two million acres are used for pasture grasses and 535,000 acres for hay. The principal cultivated crop is oats which grows on 939,000 acres, or more than 50 per cent of the total. Next in order of acreage, come turnips, potatoes, barley and wheat (86,000 acres).

* * *

ACTING on the recommendation of the Saskatchewan Department of Agriculture, the federal government has proclaimed all of Saskatchewan as a restricted area for the eradication of bovine tuberculosis. In future, petitions will not be required from areas about to be tested.

* * *

A REPORT from the Dominion Bureau of Statistics covering the dairying industry in 1950 shows that milk production last year fell to the lowest point in ten years, following three recessions which occurred in 1946, 1948 and last year. The drops in each of these years amounting to 700,000,000, 500,000,000 and 400,000,000 pounds of milk respectively.

U.S. farmers received during the first six months of 1951 about 20 per cent more money than for the first six months of 1950. Average prices which farmers paid for goods used in production increased 13 per cent.

* * *

THE annual pig crop of the United States has increased each year since 1946, when 18 million pigs were saved from spring and fall litters. This year, at 63.8 millions, the spring pig crop was seven per cent more than last year, and an expected 42 million fall pigs would be up three per cent from last year.

* * *

IN 1950, British imports of Canadian wheat, flour, eggs and canned salmon decreased very substantially. Larger quantities of bacon, cheese and apples were imported. Canada no longer appears in the list of countries selling beef in the United Kingdom.

* * *

NOMINATIONS closed on July 1 for the 1951 Master Farm Family Program in Alberta. The Hon. D. A. Ure, Minister of Agriculture, points out that this is not a competition, but a method of giving recognition and prominence each year to five farmers in Alberta who practice good farming, right living and clear thinking. Award in each case is a bronze plaque, a gate sign and a cheque for $1,000.

* * *

THE latest Newfoundland livestock population figures are for October 1, 1945, when there were 14,455 milk cows and heifers, 8,489 other cattle, 85,802 sheep and 14,749 horses.

* * *

ONTARIO livestock producers in the Hamilton area, after a year of discussion, decided in April this year to put on a financial campaign to acquire sufficient money to purchase an existing packing plant. Basis of contribution will be so much per month during the spring and summer season this year, looking toward ownership of the plant not later than October 1. The area included would involve the counties of Lincoln, Wentworth, Haldiman, Norfolk, Welland, Brant and Oxford.

* * *

IN 1949, fourteen co-operative farms operated in Saskatchewan with a total of 165 members. With two more farms incorporated late last year, and four more this year, 205 co-operative farmers now own or lease about 59,000 acres. Income for the 14 farms was $336,736 from total assets of $856,036, represented by land, livestock, equipment and buildings.

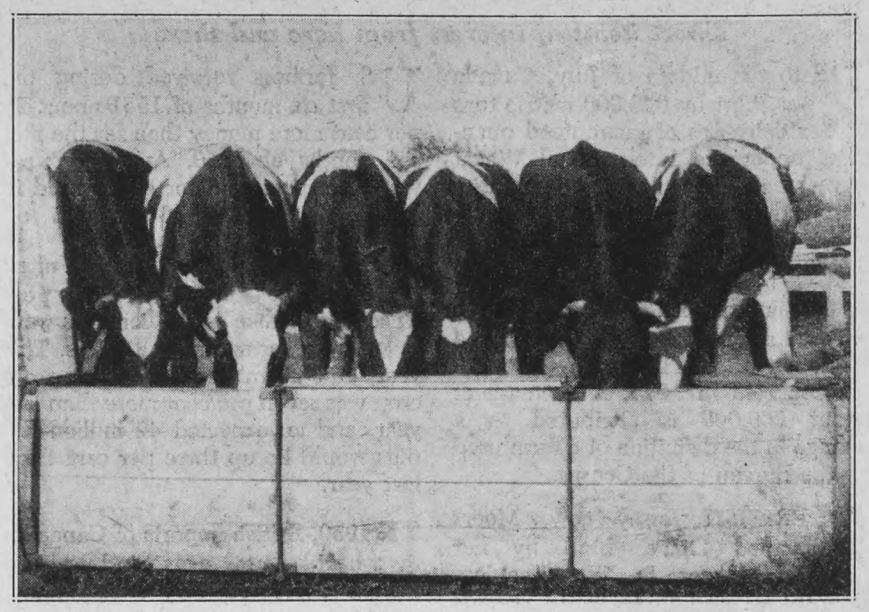
* * *

THE value of forage seed crops produced in Canada in 1950 was $13,526,000, according to the Dominion Bureau of Statistics. This figure was slightly higher than the 1949 value of these crops. Most provinces showed decreases, but Alberta increased the value of her forage seed crops by 50 per cent to reach a total value of $6,603,000 of which $3,780,000 came from nine million pounds of alfalfa seed.

* * *

LEGISLATIVE aid to finance wheat rust research has been given this year in three states, North Dakota ($83,000 over two years), Minnesota ($185,000 over two years), and Kansas ($150,000).

# LIVESTOCK



*Mrs. Ethel Kerns, Wimborne, Alta., believes these six Holstein milkers from their herd best illustrate how water is correctly added for milk making.*

## We Like It Here

***He had tried Ontario, but likes Alberta and plenty of space***

THE old lady who kissed her cow said that it was all a matter of taste. Perhaps something of the same idea applies to Fred Zielte, who with his brother, Wally, farms 2,200 acres south of Goddard, Alberta. One quarter section is leased, and there are 1,200 acres of cropland.

Fred Zielte, with whom I talked, said they had been at Goddard about seven years. Born at Qu'Appelle, Saskatchewan, he had tried Ontario. He had managed to get about as far away from prairie conditions as he could, by going to the Niagara Peninsula in the St. Catherines-Jordan district. "I wasn't used to it, and couldn't make friends there. We like it here," said Mr. Zielte, and that was that. Mrs. Zielte, incidentally, plays most stringed instruments and had been recording with the local orchestra for the radio on the night previous to my visit.

Fred Zielte likes livestock. "It's something to depend on," he said. Raw prairie had been broken up rapidly in the past two years, and quarter sections of raw land were selling at from $1,500 to $2,000 per quarter. There was not, however, very much livestock in the area as yet. I saw the Zielte herd of about 50 head on good pasture, and they certainly appealed to me as being of excellent type, low-set and blocky. A substantial number of them were two-year-old heifers.

The grain crop last year consisted of about 600 acres of wheat, 35 acres of barley, and about 40 acres of oats used for green feed. The farm is in an area where yields were good last year, thanks to plenty of rain for filling the heads. "You can certainly see the difference in the crop when you summerfallow properly and keep the weeds down," said Mr. Zielte. No difficulty has been experienced yet from soil drifting, but cultivation is shallow —about four inches. "It will dry out as deep as you cultivate," I was told. Mr. Zielte likes to use the cultivator, mostly to keep the soil ridged and cloddy. The one-way disk is used the first time, but no more than necessary. A new Graeme-Hoeme cultivator had just been purchased, and the fallow would be gone over four or five times in the season. The field I saw had been gone over three times and would be rod-weeded and cultivated again in the fall.

Crested wheat grass is used for tame hay and is giving satisfaction.

I don't suppose I am any different from a good many other people in this respect, but I do enjoy seeing a farm that is well managed, well cropped and has well-bred and well-cared-for livestock as a part of the farm business. Barring long periods of abnormal weather, the combination is unbeatable for continued success.—H.S.F.

### *Hog Cabins*

THE Experimental Farm at Indian Head, Saskatchewan, claims success with what is called "the all-year hog cabin" for which plans and specifications can be secured from any experimental station. The cabin is recommended for boars, dry sows and younger pigs. It is six feet by eight feet in size, with a gable roof and is constructed on skids with plank floors. Walls and roof are of single-ply, rough lumber, the cracks between the boards being covered by battens. Door and ventilation are combined in an opening at one end, which should face the south.

For winter the cabins are crated with boards or woven wire and banked with tightly packed straw, with which the roof is also covered to a good depth. A porch in front of the open door of each cabin serves as a windbreak.

W. W. Cramm of the Indian Head Farm suggests that swine breeding stock do better under natural, semi-outdoor conditions associated with pasture, range and outdoor shelters. The pigs thus get the benefit of direct sunshine, fresh air and exercise the year round. On pasture, pigs secure an economical and healthful supplement to the grain ration.

### *Dehorning of Market Cattle*

THE dehorning of market cattle is not making as much progress in western Canada as ought to be the case. Horns on commercial cattle serve no good purpose, and the obvious best time to dehorn is when the animals are young.

There are horned cattle penalties in effect in each of the prairie provinces,

but since the penalty is only one or two dollars per head, and since the present price of market cattle is at a record high level, the penalties apparently are not high enough to make much impression. Why this is so is somewhat difficult to understand, because the penalties are only applied in order to prevent other and much more serious costs which must be charged against horned cattle. These include the cost of losses due to bruising, some deaths during shipment, and losses in feed lots by disturbance created by horned cattle.

Of these losses, W. H. T. Mead, Livestock Commissioner for Alberta, says: "Most important of all . . . the market for unfinished cattle is provided by those people who make a business of cattle finishing. The feeder is always subject to risk and anything that can be done to reduce his risk increases the value of our cattle. Some feeders will not even bid on horned cattle unless they can be bought at a bargain price.

"It is best to dehorn at an early age," says Mr. Mead. Various methods are used, according to age, as follows: before ten days of age, by the use of dehorning paste; up to three months, by the use of a dehorning spoon or gouger; from three to six or seven months, by a Barnes type dehorner; and from seven months to two years, by the large Keystone type dehorner. Older cattle should be dehorned with a saw to avoid crushing after the horn becomes brittle.

### *They Need Vitamin A*

MANY hogs fed on grain-tankage-mineral rations in confined quarters are lost or develop into chronic runts, says the Experimental Station at Beaverlodge, Alberta. Symptoms are said to be "a strained facial expression and peculiar position of the ears, giving a wild boar appearance; nervous derangement; lack of muscular coordination, usually developing quickly into posterior or more general paralysis; inability or disinclination to feed normally; contortion and miscellaneous ailments such as strangling and foamy discharge at nostrils. An occasional pig walks in circles."

Pigs fed fish oil that is high in vitamin A, and those that receive green, or cured alfalfa, do not develop these symptoms. Ailing pigs in most cases can be brought completely around and marketed in normal condition by the feeding of skim milk, fish oil and greens. Fish oil, at the rate of one tablespoonful per sow daily throughout pregnancy, or the same amount given to fattening hogs up to the weight of 100 pounds, is recommended where green feed is not available.

### *Performance Counts*

UP to now, in proving a sire, it has been possible with dairy cattle, for example, to account for only a few of the factors which influence production of milk and butterfat. Breeding is by no means the sole influential factor. Feeding, general condition, and number of times milked per day, are each important, in addition to the length of the dry period, the length of the lactation period, and so on. A proven bull has been considered to be one whose daughters have demonstrated that they can produce more than their dams.

Some research workers in Wisconsin have not been satisfied that this kind of proving is entirely adequate. Age, length of lactation, and number of milkings per day do not show the entire picture. Some sires, rated high in natural service, have done poorly in artificial breeding. Bulls, once proven, might not do so well later on; and some farmers who have paid high prices for a proven sire, have later found its progeny disappointing.

Based on a study of the records of nearly 1,000 cows in 47 Wisconsin herds, these research workers have developed a new index for proving sires, which they believe adds to the accuracy of proving, but is not necessarily the last word. This index includes the length of the last dry period, condition of dry cows and heifers, days with calf while milking, rate of feeding digestible nutrients, proportion of protein in the ration, and size of the herd. By this new method the production of the daughters is compared with that of their dams, and then the environment index is worked out to show how much difference between the daughters and their dams is due to the six environmental factors just enumerated.

For example, in the case of one bull, increase in the production of the daughters over their dams' was 25 pounds of butterfat by the usual method. By using the new index, the researchers found that better living conditions alone gave the daughters a 37-pound advantage over their dams, so that the bull actually decreased rather than increased production. In another example, a proven sire had increased production in his daughters by 116 pounds of butterfat under the old test. The researchers were only able to claim seven pounds of this increase as a result of the environmental factors. Consequently, this bull was really proven good.

### *Cattle Grazing Habits*

STUDENTS of nutrition and livestock management have spent a great deal of time in recent years watching the grazing behaviour of cattle, in the hope that observation as to the hours and times cattle graze, together with their preferences among available plants, might lead to useful information. A recent meeting of the Association for the Study of Animal Behaviour in London, England, brought out the results of several sets of observations, as reported by "The Australian Dairy Review." These were briefly as follows:

Representatives of the Rowett Research Institute reported that the behaviour of a grazing animal does not necessarily reflect its nutritional and physiological needs, suggesting, therefore, that it is unwise to base a system of animal management on the recorded observations of animal behaviour.

One report indicated that a cow normally spends seven hours grazing and six-and-one-quarter hours chewing her cud. In a 24-hour period, she has five grazing cycles, the time between being spent in chewing her cud and resting.

Another set of observations reported that cows grazed 6.52 hours, lay down 9.2 hours, loafed 8.62 hours, chewed their cuds 5.6 hours, deposited droppings 11.6 times, urinated 9.8 times, and drank 3.8 times in 24 hours. On the average, the cows walked 3,060 yards, but varied from 2,000 to more than 4,000 yards according to the

quality and quantity of grass available.

Cornell University investigations report indicated that grazing time was slightly below eight hours, of which 60 per cent was by day and 40 per cent by night. The distance travelled was 2½ miles in 24 hours, of which 80 per cent was by day and 20 per cent by night. Cud chewing occupied just under seven hours, partly lying down and partly standing up. Slightly less than 12 hours was spent lying down in nine periods, ranging from less than one hour to more than six. Calves three months old suckled three times, 15 minutes each. The cows drank only once a day, deposited droppings 12 times a day, and urinated nine times. An average of 46 pounds of fresh manure was deposited daily, which over a period of 160 days would mean 7,000 pounds covering 1/35th of an acre. Grazing time was found to be constant, but the amount of grass consumed was not.

### *A.I. in Britain*

A RECENT conference in England on the general question of dairy farming brought the comment from Dr. John Hammond of Cambridge University that, within a year, the British Freisian would be the most numerous breed in the country. They were breeding truer for milk production through artificial insemination than any other breed, mainly because the bulls used were proven sons of closely related, high-yielding families.

Farming News also reports Dr. Hammond as saying that well over half a million cows had been inseminated in 1950, and that this rapid spread put a great responsibility—in fact the whole future of the industry—on the shoulders of bull selectors. He is reported as saying that improved yields would come much more quickly through the use of good bulls than by culling low yielders; also, that if the low yielders were used for the production of beef by mating them to a good beef bull, the offspring would also be superior. He looks forward to the time when a much sharper division would exist between the specialized bull breeder and the commercial dairy farmer.

Several speakers at the same conference pointed out that with the development of artificial insemination, it was all the more important that the improvement of feeding and management should be hastened. One speaker at this conference of experts was reported as saying that while he had no wish to abuse a most loyal and hardworking section of the community, he did not think the average commercial dairy farmer was yet fitted to handle the highly developed animal that was, as a result of A.I., being put into his hands. Unless education on nutrition became more widespread, disaster, discredit and reaction might overtake this modern breeding movement.

### *Green Color for Health*

HOW many pigs on the average do you lose out of a litter? Each one lost between birth and three weeks of age means the price of from 100 to 150 pounds of feed, according to an authority at Purdue University, Indiana. Over a period of 24 years, between 1921 and 1944, 1,336 spring litters were farrowed at the Purdue Swine Farm, with an average of 9.8 pigs at farrowing and 6.42 at weaning time. This was a loss of 34.56 per cent, including 5.16 per cent stillborn.

The record, by present standards, was none too good, and Purdue experts have since been trying to cut down the loss. Recently 1,000 young pigs which died, or were purposely killed during the first week after farrowing, were examined in a search for causes of weakness. The examination indicated that a large percentage of the deaths of very young pigs are caused by conditions existing at the time of birth, which predispose them to weakness and abnormality. Very common among the conditions observed were enlargement and fatty degeneration of the liver, albuminous degeneration of the kidneys, puffy swelling of tissue, and sometimes an enlargement of the thyroid and adrenal glands.

We are told that a relatively small number of the pigs showed any evidence of injury resulting from being stepped on, or laid on, by the sows. The conclusion was that most of the abnormalities appear to develop during gestation and not after the pigs are born. These post-mortem examinations of young pigs definitely showed that very few healthy pigs are killed by carelessness of the sow during the first few days of life. Most of the losses appear to be due to the fact that the pigs are subnormal, unresponsive, and are not normally active enough to escape injury. We are told that a majority of the pigs examined do not show any evidence of starvation, and die even on a full stomach.

Other evidence from experiment stations in Missouri, Wisconsin and Illinois, have shown that a large percentage of baby pig losses are due to nutritional deficiencies, and even where rations of corn, soybean meal, tankage, fish meal, minerals and cod liver oil were fed in the belief that this represented a balanced diet, some other factor appears necessary for the development of the pig during its embryonic life and until weaning.

Work in Wisconsin, Illinois and Indiana indicates that the deficiencies may be partly prevented, and the life of the pigs lengthened, if ten to 15 per cent by weight of high quality alfalfa meal is mixed in winter sow rations. Doing this increased the number of pigs weaned from ten to 80 per cent under dry lot conditions in Illinois. The alfalfa meal adds fibre or bulk to the ration, which helps to keep them from becoming too fat.

This suggests an even better method of supplying indispensible nutrients, namely, by allowing sows and gilts free access to green pasture. Results at Indiana and Illinois indicate that sows can store some of these nutrients during pasture feeding, which will help to carry them through the period of gestation when green forage is not available. At Illinois, the residual effects of rye pasture were indicated by a survival of 90 per cent of the pigs from sows on rye during the winter gestation period, where only 26 per cent survived from sows fed on the basal diet on dry lot.

This brings us again to the importance of fine-stemmed, leafy legumes that are bright green in color. Said an Indiana authority, "Since green color is the symbol of health and lush growth in the plant world, green colors could also be regarded as the symbol of well-balanced swine rations."

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| OIL-BATH AIR CLEANER | Yes | Yes | No | Yes | Yes | Yes | Yes |
| FLOATING OIL INTAKE | Yes | No | No | Yes | No | Yes | Yes |
| DUAL AUTOMATIC SPARK CONTROL | Yes | No | Yes | Yes | No | Yes | Yes |
| BY-PASS WATER CIRCULATION | Yes | Yes | No | Yes | Yes | Yes | Yes |
| PRECISION CONNECTING ROD BEARINGS | Yes | Yes | No | Yes | Yes | Yes | Yes |
| FLOATING PISTON PINS | Yes | Yes | No | Yes | Yes | No | Yes |
| ROLLER BEARING UNIVERSAL JOINTS | Yes | Yes | No | Yes | Yes | Yes | Yes |
| CENTER STEERING (Equal Length Tie Rods) | No | Yes | Yes | Yes | Yes | Yes | Yes |
| TAPERED ROLLER DIFFERENTIAL BEARINGS | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| FULL HOTCHKISS DRIVE | Yes | Yes | No | Yes | Yes | Yes | Yes |
| SPLASH-PROOF IGNITION SHIELDING | Yes | No | No | Yes | Yes | Yes | No |
| "SEA-LEG" REAR SHOCK ABSORBERS | Yes | No | Yes | Yes | Yes | Yes | Yes |
| 40-AMP. GENERATOR, OR GREATER | Yes | No | Yes | Yes | Yes | Yes | Yes |
| AUTOMATIC CHOKE | Yes | No | No | Yes | Yes | Yes | Yes |
| TOTAL QUALITY SCORE | 19 | 11 | 5 | 20 | 17 | 18 | 19 |

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# FIELD

***Fuel tanks at the Carrot River co-operative farms.***

Tractor fuel for these farms must be hauled 25 miles. The operators therefore designed these portable tanks which are hauled about to the scenes of field operations. Leaning against the drill is Bohdan Borsa of River Bend Farm, with his daughter Beverley.

## *Pure Research Required*

"THERE are, I suppose, many here who can remember the first annual meeting held on this station 31 years ago," said J. G. Taggart, Deputy Minister, Canada Department of Agriculture, in addressing the 31st annual meeting on the Swift Current Experimental Farm. "At that time, in the early 1920's, power on the farms was supplied by horses, and the basic tillage implement was the moldboard plow. The technological revolution that has largely swept away the horse and the plow on the prairies has been as great and more spectacular in the field of harvesting. The changes throughout agricultural production are very great."

Dr. Taggart was of the opinion that these changes have led to greater efficiency, increasing productivity per man, productivity per acre, and reducing production costs.

Available crops have also been improved. When the first field day was held at Swift Current, Marquis wheat was just becoming generally grown, and Red Fife was grown on many farms. Red Fife gave way to Marquis, and Marquis in turn has given way to improved varieties. At the same time knowledge of insects that attack crops has been extended, and a lot has been learned about crop diseases. Means of controlling crop losses through these two causes have been studied, and progress has been made.

Many of the revolutionary changes that have been witnessed are attributed by Dr. Taggart to experimental methods and experimental work carried on at the universities, experimental farms and other research institutions.

Experimental work within the framework of present knowledge has been productive and is still important. However, the growing of a crop or an animal is a "phenomena of extreme complexity," controlled by many factors that are not yet adequately understood. The day inevitably comes when experimental work is not enough, and it becomes necessary to increase pure research in order to find out the "why" of crop and animal production. "We need to know why it is that we might do identical things here and at Indian Head and still get different results from the two tests. We can now tell to some extent by reference to present knowledge, but in the next ten years the margins of knowledge must be pressed back to give us more of the answers."

Dr. Taggart stated that at the present time he is not in a position to recommend radical changes in the dry farming techniques practiced in southwestern Saskatchewan. He did not, however, feel that any really permanent system of agriculture that will stand up over the centuries has yet been developed in the dry areas. Further fundamental research might provide some of the answers to the problem of the permanence of western agriculture, and he felt that an institution such as the Swift Current farm had a very real responsibility to add to the general stream of agricultural knowledge that will flow on to following generations.

"By experience and experiment we have made progress and built up a body of agricultural lore and practice," concluded the deputy minister. "We have not exhausted that method of approach, but we have reached the point where it is less productive so we now must dig more deeply into the fundamental scientific processes and learn to know those things which ultimately control the growth of our farm crops and herds. This station has the opportunity of making an even greater contribution in the future than it has in the past."

## *Fertilizers for the Peace*

DONALD MACDONALD reports that, for the Peace River region, eight years' work on the illustration stations in the area show ammonium phosphate, 11-48-0, at 25 pounds per acre, applied to wheat after fallow, increased yields from seven to 56 per cent, over yields from untreated check areas. The average increase was 3.8 bushels per acre, or 23 per cent of average yield. Cost was approximately $1.20 per acre plus the cost of handling.

There does not seem to be any important carryover of fertilizer from one year to another, since it appears that a normal grain crop will use most of the fertilizers in a 25-pound application, so that the small amount left over for the second year would not be enough to produce much response.

There does not appear to be any pronounced deficiency or any plant food nutrient in either the black or the grey soils. Cereal crops, however, seem to respond to applications of phosphate, especially if accompanied by small amounts of nitrogen The explanation is that the plant does not feed on the soil supply of phosphorus until it is about four weeks old. However, if phosphates are applied as

fertilizer, the element seems to be available to the plant almost at once.

Much the same is true of nitrogen. Benefits derived from fertilizer applications include, "greater rooting at early stages of development, uniform stands relatively free from weeds, advanced maturity, increased yields, and higher grades." Obviously, restricted moisture supplies or untimely frost may nullify some of this response.

### *More Use of Sloughs*

SLOUGHS that flood in the spring and dry up in early summer, and do not have much alkali, are the ones which can be most readily improved, according to C. H. Keys, Experimental Station, Scott, Saskatchewan.

Where there is more than two per cent alkali, which is usually indicated by a white surface, forage crops for hay or pasture cannot be grown. If there is less than two per cent, Western rye grass or brome grass may be used.

Best results are secured where mixtures including several grasses and legumes are used, since each crop tends to adapt itself to the conditions most suited to it. Mr. Keys suggests 12 pounds per acre, with the larger seeds making up half of the total weight. If there is some alkali, he suggests five pounds of brome, five pounds of Western rye grass, and two pounds of alfalfa. Otherwise, a suggested seeding formula would include five pounds of brome, three pounds of reed canary grass, two pounds of timothy, and two pounds of alfalfa.

Sloughs that are free from alkali and flood up to two weeks will grow brome grass, Western rye grass, crested wheat grass, and alfalfa. Where flooding is from four to seven weeks, Western rye grass, brome grass and reed canary grass are needed. If flooding lasts more than seven weeks, reed canary grass is the only forage crop which is likely to prove successful.

Late fall seeding, about the third week in October, is practicable, but the area should be well worked. Shallow seeding, and even broadcasting, have given good stands, but seeding directly into native sod is likely to produce thin and patchy stands. There should be moisture at or near the surface.

### *Poison Ivy*

POISON IVY will grow almost anywhere and it is about as annoying as mosquitos and black flies. Dogs may be badly affected, and may also carry the poison to their masters.

Botanists in the Federal Department of Agriculture say that poison ivy is the only native Canadian plant with a three-part leaf and white fruit. The Virginia creeper, with which it is often confused, has five-part leaves and blue fruit. The poison ivy leaves are always arranged alternately on the woody stem, and each leaf has three leaflets, which vary in shape, size, texture and color. The edges of the leaves may be coarse-toothed, or entire. The leaves are noticeably reddish in the spring, but become green, with a smooth, glossy surface later in the season. The sprays of small, inconspicuous white flowers appear in early summer, followed by clusters of greenish-yellow fruits about the size and hardness of peas. In the fall, the leaves may turn orange, red and scarlet, and

the green-yellow color of the fruit changes to a white and waxy appearance.

People vary in susceptibility to poison ivy. With some, it is sufficient to immediately wash affected parts with laundry soap and warm water. Alcohol, kerosene, or gasoline are useful alternatives. For a rash, use a solution made of a five-grain tablet of potassium permanganate in one quart of water. Calamine lotion is better for the face and hands, as it does not stain the skin. Do not use greasy or oily substances which may dissolve and spread the poison. If an attack is severe, see a doctor—it might be mistaken for some other skin trouble.

### *Sending Samples*

EVERY day a number of samples are received from farmers by laboratories of the Canada Department of Agriculture, or by our universities, or provincial departments of agriculture. These range from tiny insects to whole plants which may be diseased, or plants sent in for identification. In many cases, the sample comes without any indication as to who sent it, or what kind of information the sender needs.

Frequently, these samples do not need to be sent long distances because the local agricultural representative, or district agriculturist, may be able to identify the specimen or give the required information. In any case, he can advise as to the proper place to send the sample.

Here are some suggestions from the Department of Agriculture at Ottawa, as to how to prepare and send samples:

Plants forwarded for examination should include, when possible, the root, flower and seed. They should be kept fresh by wrapping in moist paper before packaging. If this cannot be done, it is better to carefully press and dry the plant before mailing.

When sending diseased or insect-infested plants, make sure that the sample is a representative one. Sometimes it may be necessary to send the whole plant, including the root, but in such cases the earth should be removed from around the roots.

Insects for identification should be placed in strong cardboard or tin boxes, or in glass vials, and should be packaged with heavy wrapping paper. If possible, include both the young and the adult stages of the insect.

Write an accompanying letter, and state what you wish to know about the specimen. If you know the name of the plant, give it, and also state whether it is grown in the open field, garden, or greenhouse. The more information you give, the more help it will be in identifying the specimen quickly.

Last, but not least, be very sure to place your name and address on the package, and on your accompanying letter.

### *Causes of Low Quality Hay*

MOST commonly grown hay crops are in the early heading stage by mid-June. At this time, they contain around 14 per cent of protein, which is the most valuable nutrient in hay, and is largely concentrated in the leaves. By late June or early July, these crops have reached the flowering stage, and the protein content has dropped to 11 per cent. By mid-July,

they are midway between flowering and seed, and protein content has dropped to seven per cent. Maturity is probably reached in August or September, and according to the Experimental Station at Scott, Saskatchewan, protein has dropped by this time to 4.5 per cent.

The same station gives the results of feeding hay at these different stages to steers, the hay in this case being alfalfa hay, fed in the bud stage, at the ten-per-cent-bloom stage, in full bloom, and when mature. The hay cut in the bud stage produced 100 pounds of gain on 1,628 pounds of hay. When ten per cent in bloom, the resulting hay produced 100 pounds of gain from 2,086 pounds of hay. Cut at full bloom, 2,063 pounds of hay were required; and at maturity 3,910 pounds. These increased quantities of hay required to produce 100 pounds of gain, follow the decrease in protein content which takes place as plants approach maturity.

Any farmer knows, however, that poor quality hay is not solely due to the degree of maturity. Weedy or thin stands which result in coarse, heavy stems, with a high percentage of weeds and low percentage of leaves, produce low quality hay. Weather damage, resulting in loss of color and protein, results from unfavorable weather at haying time, which may even cause moldiness or mustiness. Overcuring makes the hay brittle, and brings about a very high loss of leaves. If undercured hay is baled and stacked, heating fermentation or moldiness may result, and finally, according to the Lethbridge station, handling hay during hot, dry, windy weather generally results in a great loss of leaves and a stemmy, poor quality hay.

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### *Food and Man*

HUMAN beings cannot live without food. If we exclude seafood of all kinds, it is safe to say that food cannot be produced in quantity by any practicable method other than from the soil.

Over the centuries, and particularly within the last 100 years, great strides have been made in the ability of society to provide itself with food. It is rather striking that this progress has been much more noticeable in the science, than in the art, of farming. Indeed, there may be a question as to whether the extraordinary progress, which science has made in relation to agriculture, has not led to a decline in some aspects of farming art.

Much farming is carried on in western Canada with very little, if any, regard for what goes on under the surface of the soil. It is there that the roots of crop plants develop in a world of their own. It is a world of darkness, inhabited, in the better soils by myriads of tiny micro-organisms, which bring about decay of fallen plant material, and make available much food for the roots of plants. There are also vast numbers of insects which, in addition to their effect on fertility, tunnel through the soil in innumerable places and thus let in air and moisture. The death and decay of these myriads of small life itself adds to the supply of food for plants.

It is correct to say that all life is sustained, to a substantial degree, by the decay of life which has gone before. It is the return to the earth of life which has matured and died, whether it be the plant from which the seed has been harvested or shattered, or an animal body, that maintains the balance established by nature between what takes place above the surface and what goes on beneath it. Plants have the ability, by a process known as photosynthesis, to manufacture carbohydrates which, with the aid of light, they are able to compound from the carbon dioxide in the air, and from the hydrogen and oxygen in the water which they take up from the soil. These carbohydrates are energy compounds, and the human and animal body, as we learn from our own experience, and from our experience with animals, must be balanced with protein. These two classes of food have been called the "go and grow" foods.

The microbes which inhabit the darkness under the surface of the soil, likewise require a balanced diet of carbohydrate, or energy foods, and protein, or growth foods, and they secure these foods by a process exactly the reverse of the plant method. They feed on decaying vegetable and other matter. They can even extract nitrogen, potassium, phosphorus, calcium and other nutrients for their own nourishment, from clay. Moreover, as has been pointed out by Dr. W. A. Albrecht, of the Missouri College of Agriculture, they eat at the first table, and the plants we try to grow take what is left. The microbes do not require a large amount of the growth or protein foods, but they do require some, and when we plow down large amounts of straw, a woody carbohydrate material, the following crops suffer, because the microbes are taking too large a share of the available fertility. When, however, we plow down green manures and legumes, such as the clovers and alfalfa, we give them a balanced diet from which they can secure, in the process of hastening decay, all they need for growth and energy, and still leave an abundance for plant food.

Thus, both the science and the art of farming require recognition of the fact that this balancing process is in constant operation below as well as above the surface of the soil. It is as important that the organisms under the soil be well fed and energetic as it is for the plants above ground. These organisms are the instruments of decay and redistribution. They take the complex compounds which the plants have built up and, in the darkness underground, tear them apart again, simplifying them so that the roots of the new generations of plants may feed on them and send their substance above ground, to make leaves and fruit and seeds as food for man and other animals.

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THE sale of home-grown and imported seed, for seeding in Canada, is subject to the provisions of the Seeds Act, which requires that all seed offered for sale should be tested and labelled with the seed grade. This grade is based on purity, germination and general quality, and new varieties must be licensed before being offered for sale.

* * *

THE Experimental Station at Beaverlodge, Alberta (Peace River area) recommends mid to late June as the best time for seeding down meadow crops. Fall seedings have not been very satisfactory.

# Jessoma --- Farm of Royal Jerseys

***Top quality cattle reared in a beautiful setting by a breeder who knows how to breed the best***

*by* **THELMA CARLETON**

JERSEY history has been made within the quiet acres of Jessoma, a farm on the sunny slopes above Milner which radiates the air of active accomplishment amid the charm of fairyland beauty.

From its 115 acres, situated in the Fraser Valley, 30 miles from Vancouver, have come some Jersey records which puts the genial owner, Mr. Guy Fowler, on the map as one of the most outstanding breeders of purebred Jersey cattle in Canada.

There have been only seven named as Constructive Breeders among the 3,000 Jersey Breeders of Canada, and Mr. Fowler is one of this select group.

Furthermore, since 1942, 48 bulls developed by the Jersey Breeders of Canada have been selected as Superior Sires, about one to every 60 herds. This indicates the annual chance of developing a Superior Sire is about one in 420.

But halting the achievements of the owner of Jessoma is something like trying to move the Rock of Gibraltar, and when Mr. Fowler set out to be a first-rate cattle breeder, he intended to become just that. Armed with wonderful visions, foresight and the will to learn a new trade, he has, since his farming commenced in 1934, developed ten of that 48. That figure is almost 20 per cent of the Canadian total and won against 3,000 rivals.

To be rated a Superior Sire, a bull must have at least ten daughters whose average production of butterfat exceeds 450 pounds a year and his classified daughters must average 82 per cent in points of excellence.

Two of the ten Superior Sires developed at Jessoma are twin bulls born September 6, 1942. They are sons of Jessoma's Brampton Favorite Claim and sired by Jessoma Gift's Lord. Jessoma Gift's Lord is son of Lord of the Isle and this great blood strain goes back to the famous Sultane line and directly to Golden Fern's Lad, one of the greatest bulls ever imported from Jersey and brought to the United States in 1894.

ONE of the twin bulls, Jessoma, Gilfor's Favorite has ten unselected daughters with an average of 8,936 pounds of milk and 500 pounds of butterfat at 5.62 per cent test. His 12 classified daughters averaged 8,583 pounds.

The other twin bull, Hale's Favorite Standard was sold to the Shelby County Penal Farm, Memphis, Tennessee, and has sired ten daughters with an average of 8,482 pounds of milk, and 525 pounds of butterfat with a test of 6.27.

Further accomplishments have come from this sunny, picturesque farm. Mr. Fowler has won the Gold Medal for Jerseys for the past two years, the first time it has ever been won twice by a British Columbia man.

All of this has been accomplished with the comparatively small herd of 26 cows. But since ill health turned him away from the strained activity of business life, where Mr. Fowler was at one time executive of Home Oil Distributors Ltd., he has associated his life solely with the practice of Jersey breeding where he studied all the intricate inroads of blood lines, setting his sights upon high record achievements in his royal herd.

The farm of Jessoma is a mixture of business and pleasure. The business of breeding Jerseys of a high standard type is won through tireless devotion to one's work, which brings pleasure that only success can bring. Pleasure is also gleaned from the beautiful setting in the Fraser Valley.

Drive along the winding road and over a stone bridge and you come into a peaceful and well-kept yard. There is the white house with its green roof and the familiar red barns. All are intertwined with the magic of sun and shadows and waving trees, and given purpose by the quality of the Jessoma Jerseys.


*Guy Fowler, owner of Jessoma Farm, with two of his Jersey cows.*

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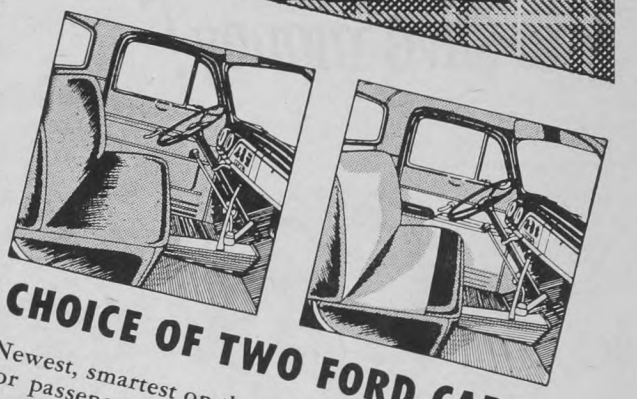

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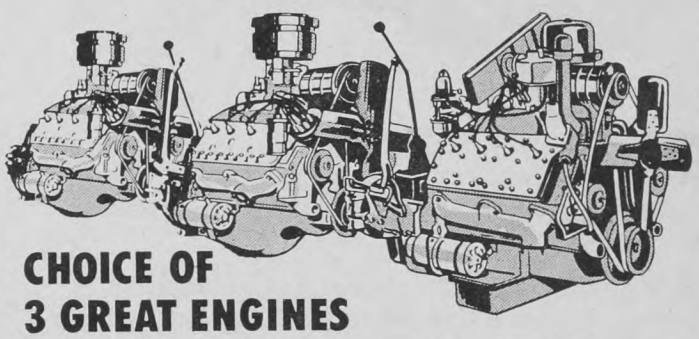

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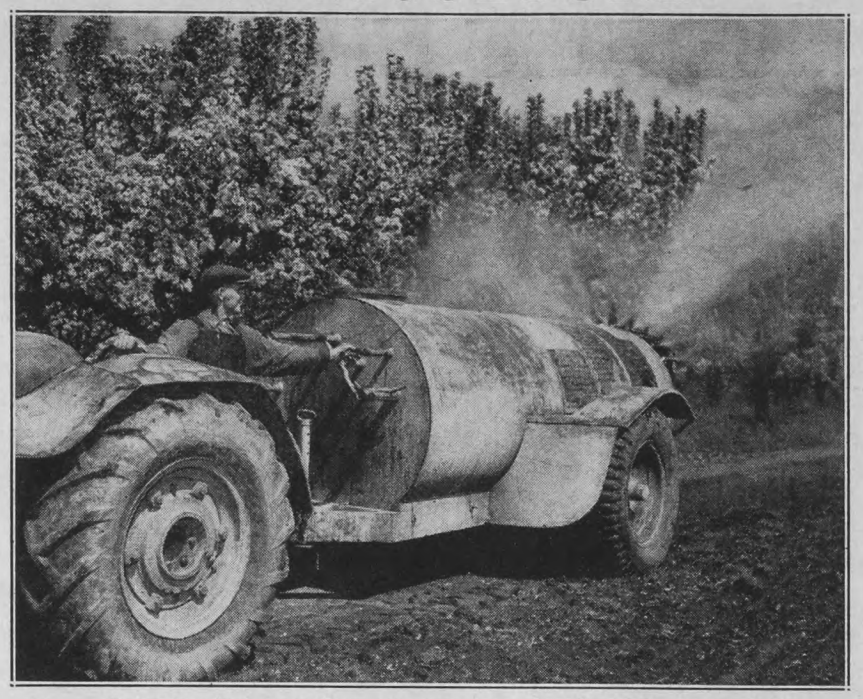
# HORTICULTURE



*Spraying fruit trees is a constant chore for the fruit grower.*

### *Blanching Vegetables*

NOW that there are so many frozen food lockers in the prairie provinces, farm housewives will no doubt take increasing advantage of locker space for the storage of fresh-frozen vegetables.

F. T. Atkinson, food technologist at the Experimental Station, Summerland, B.C., has issued a note of warning about the freezing of vegetables, because he has found that a large proportion of locker space is used for vegetables which require blanching, if dull color and clay-like flavors are to be avoided. Blanching is the use of steam or hot water to kill the cellular tissues and reduce to a minimum the development of harmful changes in the vegetables. In effect, it is partial cooking, so that when the vegetables are finally taken from the locker and made ready for serving, they need only be brought to a boil for a short time.

The result of the combined heating treatment before and after freezing is practically the same as if the cobs had been cooked as a fresh vegetable. Farm housewives who would like to be sure of the proper length of time for blanching and preservice cooking may get this information from a bulletin entitled "Freezing Fruits and Vegetables," published by the Canada Department of Agriculture. It is probably available from your agricultural representative's office, or if not, from any experimental station or the Canada Department of Agriculture, Ottawa.

For those who may believe themselves sufficiently familiar with the process so as not to require the bulletin, Mr. Atkinson issued a note of warning. He says that it is very important to chill the product immediately after blanching, in ice water or under the cold water tap, and then to package it and deliver it to the storage locker as quickly as possible.

### *Have a Good Lawn*

EARLY fall is a good period to make a new lawn in some parts of the prairies, indeed, in nearly all, if water is available. The Experimental Station at Lethbridge recommends the period from mid-August to October 1 as the best time for southern Alberta. Failing time or convenience at this period of the year, late April and May are recommended. Next to a good soil which is a primary requirement, a new lawn requires ample moisture while the seeds are germinating, and only enough heat to give optimum germination.

What is very important to give the lawn a good start is to have the seedbed fine and firm, to plant shallow, to roll or otherwise firm the soil around the seed, and to keep the soil moist until the young plants have taken firm root. This means daily sprinkling when the weather is at all warm.

The Lethbridge station recommends, for the average lawn, a mixture of three parts by weight of Kentucky bluegrass to one part of creeping red fescue, applied at the rate of three to five pounds per 1,000 square feet. White Dutch clover may be added at the rate of one ounce to five pounds of grass seed or, if one is prepared to give the lawn a great deal of attention, Kentucky bluegrass alone may be seeded at five pounds to 1,000 square feet. The method of seeding recommended is to divide the seed into two equal portions. Sow half of it one way across the lawn, followed by raking with a fine tooth rake in the same direction that the seed is sown; then seed the other half at right angles to the first, and rake in the same way. A light rolling afterwards is all that is necessary to firm the soil. Once the seed has germinated well, heavy watering, occasionally, is preferable to frequent light watering. This helps to coax the roots down deeper into the soil, and enables the grass to withstand periods of drought.

### *Step Right Up*

THERE are more effective ways of breaking your neck than through falling from ladders, but this is the method still favored by most fruitgrowers. It is true that long ladders are not now much in favor, because there is no point in falling 14 or 16 feet when ten will do just as well, particularly when there are rocks on the ground.

Lacking sky-hooks, the orchard ladder remains a necessary evil. Set carefully, it is fairly safe, but since you have to reset it perhaps 100 times a day there always comes a moment

when you fail to anticipate a slight lean, a soft pocket of ground, a sudden gust of wind, or an apple that hangs so far away as to tempt you into a dangerous stretch. If the odds against falling are 50,000 to one, you are still likely in a moderate career of orcharding to fall at least twice. Some fall only once. In a casual check of about 30 neighboring orchardists I found that in 20 years two were killed in falls from ladders, another presumably died of injuries suffered from a fall, another broke his neck and recovered, and several others suffered comparatively minor but severe injuries. That adds up to an accident rate which in any organized industry would be considered high.

Aside from their tendencies to fall, orchard ladders can be troublesome when you come to move them. Short men and tall ladders make a bad combination, and the worst of it is that the shortest men need the longest ladders. One way of moving a ladder is to wrap one arm around the step portion and the other around the swinging leg—orchard ladders have but one leg—and to lift carefully, balancing the ladder vertically. An expert will usually pull the ladder back and flip it into a new position without having to walk around it, though sometimes if the ladder is tall it overbalances his push and advances upon him like a movie villain on a heroine. I have seen strong men go staggering back 20 feet or more in efforts to fend off the gravitational ardors of ladders, usually at last to crash into a tree or trip in an irrigation ditch. The demand for sweet tempers in ladder work exceeds the supply.—Vernon Hockley, B.C.

### *Trees for the Prairies*

IT looks like a big tree-planting year for Saskatchewan and Alberta in 1951. The Alberta Department of Agriculture has recently taken over the Provincial Tree Nursery at Oliver, north of Edmonton, and in the future all evergreens shipped to Alberta citizens by the Department of Agriculture will come from this nursery. Operations are being stepped up materially, and within a few years it is expected that all the evergreens needed in the province will be available from Oliver. Trees from seed sown in 1951 will not be ready for shipment until 1955. The Alberta Minister of Agriculture, Hon. D. A. Ure, is giving substantial encouragement to tree-planting in Alberta.

Saskatchewan expects to plant more than two million trees this year, in field and roadside shelterbelts. M. E. Hartnett, Deputy Minister, has announced that the departmental program sponsored by the agricultural representative service is based on experience in shelterbelt areas such as at Conquest, where, as the result of tree-planting, better land use has resulted, soil drifting has been reduced, and higher yields have been the rule. The presence of the trees has reduced the rate of evaporation during the summer months, and has held the snow in the winter, with the result that more moisture entered the ground as the snow melted in the spring.

In the Melfort-Star City area, a good start has been made in the planting of trees along roadsides, to prevent snow from piling high on the roads. Farmers who expected to lose some grain because of the field space taken by the windbreaks have found that increased yields near the windbreaks resulted in addition to reduced erosion from winds.

It was expected that shipments would be made to 175 shipping points in the province from the Federal forest nursery stations at Indian Head and Sutherland. Largest project this summer is in the Beachy district, where 17 farmers received 108,176 trees. Plantings will be mostly of caragana, which, if set a foot apart as recommended by the forest nursery stations, require about 5,000 trees to the mile.

### *Precooling of Fruit*

SOFT fruit such as berries, cherries, apricots, peaches and plums, deteriorate rapidly after being picked if temperatures are high. It has been pointed out by horticulturists of the Department of Agriculture that no time should be lost in getting such fruit from the heat of the field at least into a cool basement, even if these fruits are being picked for a local market.

If more distant marketing is involved, fruit will keep better if it is precooled with artificial refrigeration, so that it will not overripen before being loaded into refrigerated cars. The means of doing this is to stack the fruit loosely in an insulated room and, by means of a fan, circulate a large volume of air through a bunker of ice. Alternatively, a cold air distributor unit in the room, operating under mechanical refrigeration can be used. Under either system, it should be possible to reduce field heat of fruit to a temperature of 45 degrees within eight to 24 hours. The variation in time will depend on the volume of air circulation, temperature of the air, the amount of fruit in storage, and the method of fanning.

Fruit can travel satisfactorily for several days in an ice refrigerator car if precooled in this way. Ideally, soft fruit should be held under refrigeration at the point of distribution if the full benefit of precooling is to be obtained.

### *The Siberian Elm*

THE Forest Nursery Station at Indian Head, Saskatchewan, suggests that the Siberian elm should be thoroughly tested in the prairie provinces as material for field shelterbelt planting. John Walker, superintendent, says that this species (Ulmus pumila) should not be confused with the Chinese elm, which has not proved sufficiently hardy for the prairie regions.

Seedlings of Siberian elm can be grown easily from seed sown under field conditions. They grow rapidly, with a bushy type of growth and, planted in a single row, Siberian elm trees form a dense ground cover which shades the ground and favors snow accumulation. The tree is hardy, but it is not likely to grow to a great height. It tends to mature early and thus avoids a considerable amount of winter injury. Rabbits may damage it, but recovery is fairly rapid owing to the generous growth of the tree.

Mr. Walker does point out that branches may be broken by high winds and heavy snowfall, and that unseasonable freezes may injure stems and new growth, as well as destroy the seeds. It is, nevertheless, a quick, vigorous grower which can be pruned to shape in hedges if necessary, and should prove useful.

[Guide photos

***Cattle on the Loveridge farm are mostly grade Shorthorns but with a growing percentage of purebreds headed by a Gallinger bull.***

# Diversification at Duff

***Cattle and hogs are the mainstays on this farm, settled in 1912***

GEORGE LOVERIDGE and Sons, Duff, Saskatchewan, operate one-and-a-half sections at Duff, which is in the east central portion of the province. The two sons actually operate the farm, because George Loveridge is badly crippled with arthritis following a hip injury incurred when he was party to a runaway on a hay rake. His activity is now very limited, but he does drive the car.

Mr. Loveridge came to Saskatchewan in 1903, and spent the next nine years with his brother who later moved to Grenfell. George Loveridge acquired the home site in 1912.

He had always had grade shorthorns, and a purebred sire, but the sons started into purebreds some years ago and now have nine head in addition to the grade cattle, and the herd is headed by a Gallinger bull.

The soil is fairly light on the average farm, and the rotation is the common one of grain-grain-summerfallow. Wild oats is the most troublesome weed, and the second year of wheat makes the wild oats worse, according to Mr. Loveridge, Sr. Moreover, they need feed for livestock, so that about one-half of the crop acreage is devoted to coarse grains. Straw is needed for the cattle, so the grain is cut with the binder and threshed. If necessary, some custom combining is arranged for. The Loveridges did have a small six-foot combine, but sold it and went back to threshing.

The farm also has four Yorkshire sows and a P.E. Island boar. I saw only one boar and one sow, but both looked to be good, typy individuals. All of the livestock seemed docile and friendly—a good sign. Two young bulls were slated to go to the Regina Bull Sale, and a little showing had been done at Melville and Regina Fairs, with promising results, which included at least one first prize for a young bull.

Mr. Loveridge was one of those who believed that there should be some further payment on the five-year pool, above five cents. He thought ten cents would be fairly satisfactory. Presumably the 8.3 cents which has since materialized will not be regarded as too satisfactory and certainly not as an overpayment. He believed, nevertheless, that farmers ought to be doing fairly well under the conditions which have pertained latterly. Some had probably put too much of their net earnings into improvements and had failed to realize quickly enough the cash costs of mechanized farming and the need for maintaining a good cash balance for operating expense. This failure was probably responsible for the increase in the demand for farm credit during the last year or so.—H.S.F.

***The "Sons" of George Loveridge & Sons, harvest the rye crop.***

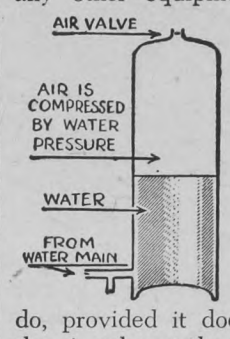


# Workshop in September

***Some ideas to use on the farm in harvest time***

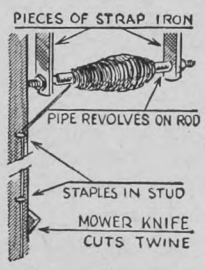
## *Emergency Compressed Air*

The sketch herewith shows how to convert water pressure into compressed air without the use of a pump or any other equipment aside from a pressure container of some kind. This will meet the emergency need for compressed air that occurs once in a while. The sketch shows an ordinary water tank—an old one will do, provided it does not leak. Close the air valve at the top, and allow the water to enter at the bottom. When the trapped air attains the same pressure as the water in the main, the inflow of water will cease. The compressed air can then be used for any purpose such as paint spraying, filling automobile tires, bicycle tires, dusting, blowing scale from radiators, spraying plants, or starting diesel engines. When the tank becomes full of water, drain it out, and repeat the process.—W.F.S.



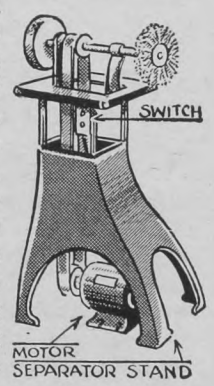

## *Handy Twine Holder*

Here is an idea that I have found very handy for keeping binder twine in the shop. I took two pieces of strap iron, fairly short, put holes in one end of each large enough to take a small rod, and stapled the other ends to the wall far enough apart to hold a short piece of pipe which would revolve around the rod, as shown in the drawing. The ends of the rod were threaded to take nuts, which makes a very simple assembly for carrying the binder twine. The end of the twine is run over to a nearby stud, and carried down it through staples to a convenient point where a mower knife section or a piece of iron sharpened to a good edge is fastened for cutting the twine as needed.—R.J.




## *Bench Grinder Stand*

I made a very satisfactory stand for a bench grinder from a discarded cream separator. When the separator was removed the stand was too low, so I removed the collar or plate at the top of it, welded four 10-inch strips of two-inch angle iron to corners of the stand, and then welded the plate to the upper ends, thus increasing the height about 10 inches, which is about right. Squares of old tire-casing under each leg helped to keep the stand steady. Instead of welding the 10-inch angle iron, one could put the stand on a heavy wood block 10 inches high or on a block of concrete and then fasten the grinder directly on the plate. The block could be bolted to the floor, or made level with adjustable leg screws. —I.W.D.

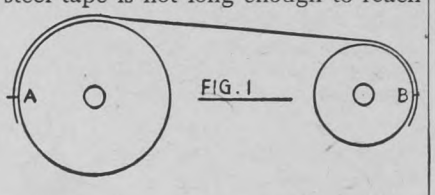


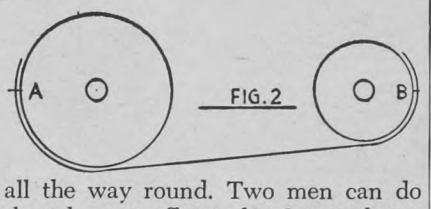

## *Grain Scoop*

This is a handy grain scoop that I made from a five-gallon paint bucket. I first took off the cover and cut the pail lengthwise as shown, a little bit above where the bail is fastened, leaving the bottom of the pail whole. Next, I cut a handhold in the upper half of the bottom and rounded the edges to keep from cutting my hand.—I.W.D.


## *Measuring*

Figures 1 and 2 in the drawing show how to measure the distance around pulleys, sheaves and drums accurately. Sometimes a tapeline or steel tape is not long enough to reach all the way round. Two men can do the job most effectively. One makes a mark at A and the other at B. Measure the top from A to B and then measure around the bottom from A to B. Add the two measurements to secure the exact distance around. Be sure to hold the end of the tape precisely at A, and measure both times and add at B.—W.F.S.




## *Power for Elevator*

The place to apply power for an elevator is at the top rather than at the bottom. If applied at the bottom, the force which lifts the weighted bucket must pull around the upper bearing at the time that both upper and lower bearings are under heavy friction. When the power is applied at the top the weighted buckets are lifted by a direct pull, with practically no friction on the chute side, or the lower elevator bearing. There would not be much difference if both upper and lower shafts were set in well-lubricated antifriction bearings. As a rule, plain bearings are used, and are not too well lubricated, so that lifting from the upper pulley would not take more than half the power required at the bottom.—I.W.D.

## *More Broom Service*

To make a broom last at least twice as long, try slipping an old silk stocking over the broom part. Cut off the foot and ankle first, then slip the upper part down over the handle and broom to within about three inches of the bottom of the broom. Tie the remainder of the stocking tightly around the bottom of the handle with string. In this way, the broom will keep its shape and will wear evenly.—A.J.W.

# FARM YOUNG PEOPLE

### *Unexpected Visitor*

ONE of the last things that you would ordinarily expect to meet on the open prairie would be a Canada lynx. This makes it all the more surprising that 15-year-old Larry Bakanec shot one of these animals on the farm of Toby Hudec at Fox Valley, about 40 miles north of Maple Creek, Saskatchewan.

It appears that a dog belonging to Mr. Hudec of Fox Valley was making quite a fuss, and Mr. Hudec wandered over to see what was troubling it. He saw a flash of fur as an animal disappeared into a bush near the house. He followed it in. When he was looking about on the ground for the unidentified animal he heard a twig snap above his head. Glancing up he saw a huge cat looking down at him.

"Mr. Hudec got out of the trees as fast as he could," says Mrs. Nick Buye, who told us the story. "He didn't have a gun at home so he went over to a neighbors to get one. Larry Bakanec came back with him with a shotgun, and shot the lynx as it watched them from a treetop."

*Nick Buye and Hubert Anton hold the Canada lynx recently shot by Larry Bakanec at Fox Valley in southwestern Saskatchewan.*

### *Scholarship in Agriculture*

SOME farm boy will be sent to an agricultural college for a four-year course as a result of a scholarship provided by the T. Eaton Co. Limited.

The scholarship winner will be a farm boy who is under 25 years of age on October 20, 1951. He will be provided college fees, lodging and board for a four-year course, commencing in the fall of 1952, at any agricultural college in Canada that he wishes to attend.

The scholarship winner will be selected in Toronto at the Royal Agricultural Winter Fair. The ministers of agriculture in each of Canada's ten provinces are being asked to nominate one candidate from their own province. These finalists will be brought to the fair at Eaton's expense, and while in Toronto the contestants will be interviewed by a committee and the winner selected.

In selecting candidates the ministers of agriculture have been asked to consider academic standing, activity in agricultural organizations, good citizenship, and the candidate's qualifications as a potential leader in community affairs.

### *Farm Girls' Camp*

NEARLY 60 girls attended the fourth annual farm girls' camp held at the Saskatoon Exhibition. The girls were between the ages of 15 and 18 years. The camp was under the direction of the extension department of the University of Saskatchewan, and given financial support by the federal and provincial departments of agriculture.

The first two days of the school, held at the School of Agriculture building on the University of Saskatchewan camps, were devoted to instructions in sewing and baking, and competitions in these two subjects.

The program of the second day also included a trip to the sanatorium, competition in the judging of costumes and menus, and a picnic supper. On the final day the girls toured the exhibits at the fair, were luncheon guests of the Saskatoon Kiwanis Club, and later attended the grandstand show as guests of the Exhibition Board.

The girls, who went in teams of three, were sponsored by local organizations in their home town, such as agricultural committees, homecraft clubs or homemakers. Prizes for judging were well distributed, with the prize for the high aggregate score in judging going to Dorothy Gilmour of the Jordan River Homecraft Club.

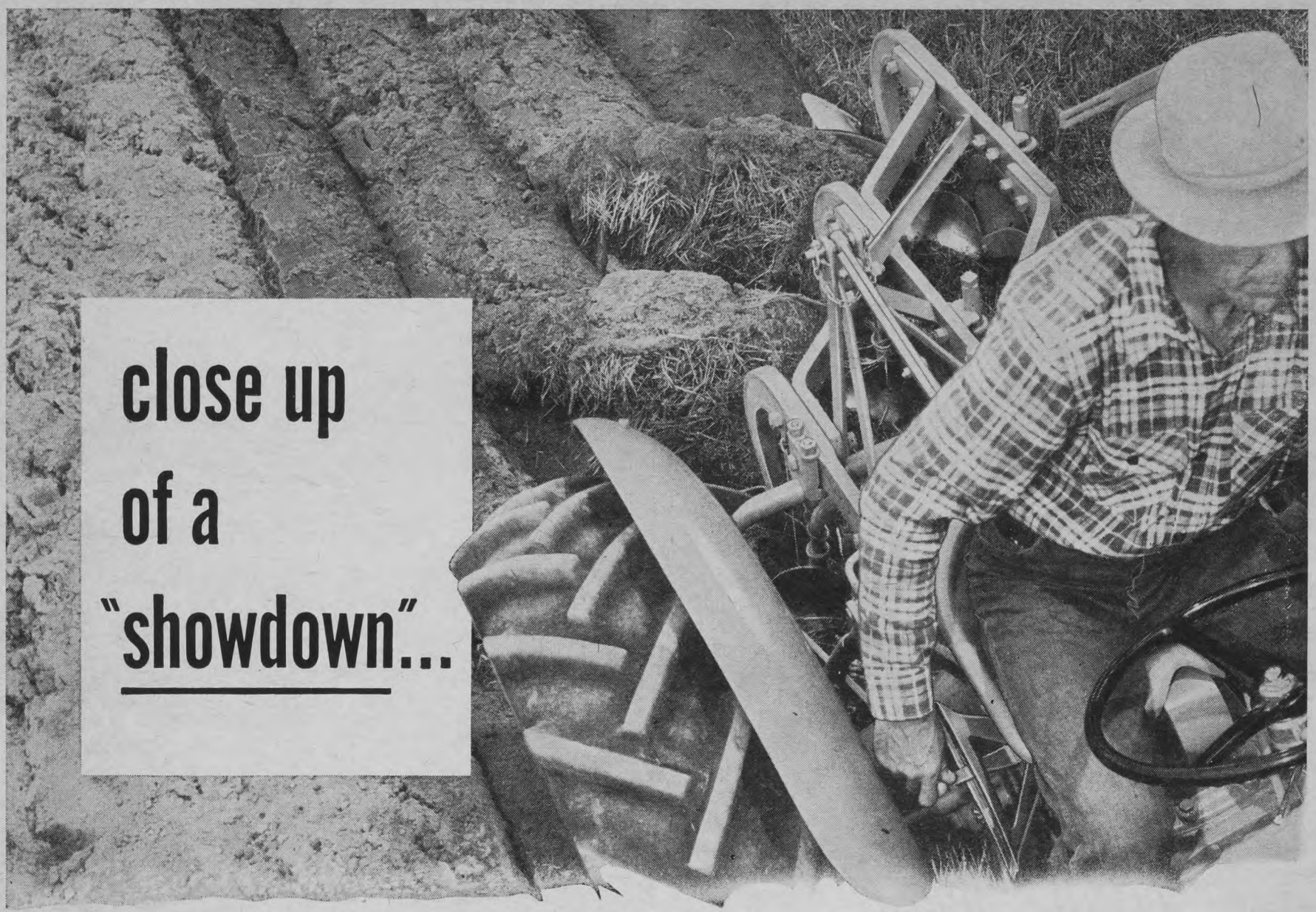
### *"The Blue Jay"*

THE small, quarterly nature magazine published by the Saskatchewan Natural History Society in co-operation with the Provincial Museum of Natural History, called "The Blue Jay," has been mentioned before in this column. It is worthy of a second mention.

The magazine is valuable to anyone interested in birds, animals and plants. It is of popular and scientific value. Favorable comment concerning the scientific value of the information contained in "The Blue Jay" has been received from leading ornithologists throughout Canada and the United States, and even the famous British Museum of Natural History has requested a subscription. The late P. A. Taverner, author of "Birds of Canada," wrote that: "It is one of the meatiest things of the sort I have seen . . . There are many notes of interest worthy of the attention of scientists."

The future of "The Blue Jay" should be promising. The limiting factor today is a small circulation and a shortage of funds. It would be unfortunate to see a non-profit enterprise as worthy as the publication of this small nature magazine discontinued, due to the failure of nature lovers to give it support. Those interested in nature study can obtain membership in the Saskatchewan Natural History Society and a subscription to "The Blue Jay" by sending one dollar to the editor at 1077 Garnett Street, Regina.

VERN ROBERT, considered one of the most perfect specimens of his kind in the United Kingdom, was recently toasted at a birthday party by 300 guests. He is an 11-year-old Hereford bull, whose sons have sold for more than $300,000, one of whom, though his sire has never been on a show ground, was supreme champion at the Royal Show in July.




# on the NEW POWER of the Ferguson

*You* be the judge.

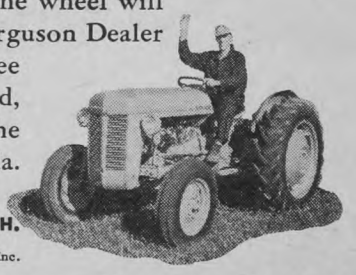
Put yourself on the comfortable seat of the mighty Ferguson Tractor. Move the lever into gear and *go*.

Touch the finger tip control lever and lower the bottoms to plowing depth. Note how quickly the engine settles to its load. Now look back at the rich, dark furrows turning so cleanly and easily behind you. See how steadily you forge ahead . . . through that boggy patch that always troubled you in the past . . . up that grade that always brought a roar of protest from the engine of your old tractor.

Convinced? Of course you are . . . for there's nothing like the power of a Ferguson Tractor. Not just engine power alone, but power that has been applied more effectively by the functioning of the unique Ferguson System.

**ARRANGE WITH YOUR DEALER FOR A DEMONSTRATION**

For there's nothing like a demonstration of the Ferguson Tractor and Ferguson System to erase forever from your mind any doubts you may have about its power and tremendous performance. Evidence of your own eyes and your own hands on the wheel will bring instant conviction. Go see your Ferguson Dealer today and make arrangements for a free demonstration on your own land. And, remember this . . . the Ferguson is the lowest-priced tractor of its kind in Canada.



**BUILDING A BETTER WORLD THROUGH BETTER FARM MECHANIZATION IS THE BUSINESS OF HARRY FERGUSON, INC., DETROIT 32, MICH.**



# FERGUSON TRACTOR

## AND 63 FERGUSON SYSTEM IMPLEMENTS

# POULTRY

*A few geese make a useful addition to the farm flock.*

## *Turkey Breeders Meet*

THE Manitoba Turkey Breeders' Association recently met in Portage la Prairie. Dr. R. H. Lay of the federal health of animals division told the 125 breeders who assembled that there had been 129 cases of Newcastle disease in Manitoba this year.

Birds destroyed included 31,227 chicks, 6,625 mature hens, 1,052 turkeys, 99 ducks and 103 geese for a total figure of 39,106 birds.

Of the 129 cases 128 were on farms, and in 124 cases the disease attacked chicks. In every instance the chicks were bought and moved to the farm. The chicks were traced to their point of origin, and it was found that they were all sold by ten hatcheries, five in Manitoba and five in Ontario. As many Manitoba hatcheries handle Ontario chicks it is possible that these hatcheries were also infected from the East.

"To me the ideal means of control would be through a vaccine," said Dr. Lay. He deplored the fact that no really satisfactory vaccine was currently available, but he held out hope for a new vaccine shortly to be released. A vaccine that can be injected into a small chick and will give a solid immunity for several weeks is required.

Professor P. A. Kondra, assistant professor, animal science department, University of Manitoba, advised the breeders to select their breeding turkeys at market age. He felt that many breeders postponed selection until the birds were ten or 11 months of age. "What you really are looking for is a bird that shows quality at market age," stated Professor Kondra.

Early feathering is important, as it makes plucking easier and the birds brood better. Selection for this characteristic should be made at eight to ten weeks of age.

It is advisable to have the breeding birds about nine months of age at the beginning of the breeding season. Frequently they are two months older. This means that two months' feed is wasted. Also the toms tend to get heavy and sluggish and are less fertile. "Many breeders prefer to start the season with young toms," said Professor Kondra. "Then to ensure high hatchability they replace the toms in the middle of the season with young, vigorous birds.

High hatchability and high egg production are vital to the turkey producer. Vigorous toms, suitable environment and good feed aid hatchability. Incubating some eggs for a few days in the beginning of the season and then candling them to check hatchability is a wise precaution.

Higher egg production can be achieved through selecting early maturing birds, and eliminating broody birds and those that stop laying half way through the season.

## *Poultry Pasture Valuable*

GOOD, nutritious pasture that receives proper care and attention will improve the growth, health and maturity of pullets on the range, as well as reducing the necessity of providing vitamins, proteins and minerals. It is also generally held that good pasture makes for better control of soil-borne diseases and parasites.

Range management tests carried on by W. F. Mountain, Head Poultryman, Experimental Station, Harrow, Ont., indicates that quality pasture will fortify growing pullets so they are better able to withstand the stress of heavy egg production which comes later. In the tests the consumption of green feeds was encouraged through imposing a shortage of mash and grain on the range pullets, and it was found that even under these artificial conditions egg production during the fall and winter was free from interruptions.

## *Culling Instruction*

"KEEP only normal healthy birds for egg production," advises a bulletin recently released by the Canada Department of Agriculture. "Allow about two months after housing to show what the flock can do; then commence culling the birds that do not respond to good feeding and management. Continue culling systematically once a month throughout the season. It is difficult to cull accurately an underfed flock in low condition, or a flock that is molting. Feed for eggs; then cull."

This is the substance of the total written matter in this new bulletin. Color photographs are used to illustrate the appearance of good egg producers. Color photographs illustrate good and poor White Leghorn, Plymouth Rock and New Hampshire breed types, and additional pictures show other characteristics of the good and the poor layer. With the aid of

this publication the owner of a farm flock should have little difficulty in culling unprofitable birds.

The leaflet may be obtained from the Information Service, Department of Agriculture, Ottawa. Ask for publication 842, "Guide to Culling Hens."

### *Imports of Eggs*

DURING the first half of this summer more than 2,000,000 dozen eggs were imported by Canada from the United States and Holland. At midsummer egg production in Canada was running at about 74,000 cases, or 2,220,000 dozens a week, approximately 16,000 cases or 480,000 dozens below our normal needs.

In former years Canada has produced approximately ten per cent more eggs than she consumed, and was in a net export position. Most of this surplus was taken up by Britain, but, as will be recollected, in 1949 Britain stopped buying eggs on this market, due to dollar scarcity. In spite of price supports being introduced under the Agricultural Prices Supports Act many producers reduced their flocks in the anticipation of weak markets. Actually the market has continued strong, and it is anticipated that production will increase. The present shortage is expected to be over by October or November when pullets come into full production.

### *Destroying Mites*

THE new insect killer known as lindane is highly recommended for the control of mites by the North Dakota Agricultural College Extension Service. It has been found effective used as a spray in a one-tenth of one per cent solution.

Lindane is usually sold as a 20 per cent concentrate in powder form, and the correct solution concentration can be achieved by mixing in the proportions of 6½ ounces of lindane to 10 gallons of water. Lindane, however, is also available in an oil emulsion, which is preferable for spraying roosts, buildings and nests.

Mites will also be killed by painting roosts with 40 per cent strength nicotine sulphate, or with creosote, crude petroleum or old crank case oil. DDT is effective, and as well as killing the mites it kills lice and flies.

### *Newcastle Precautions*

NEWCASTLE disease of poultry is reported to be quite well in hand. Nevertheless, it is still the part of wisdom for producers to exercise the greatest care, and precautions the producer should take bear repetition.

If all the precautions had to be boiled down to one piece of advice it would be to isolate your flock. The disease cannot develop in an uninfected flock, and, obviously, the disease must come from the outside. This means that no visitor should be allowed to set foot inside the poultry houses or yards, or on the range. Feed trucks, feed sacks, egg or poultry crates or other poultry equipment which have been on other establishments or in contact with other flocks should not be brought into your establishment unless they have been thoroughly disinfected. No outside birds should be brought onto the premises.

If there is any sign of the disease in the flock it should be reported immediately to a representative of the Health of Animals Division, or to the local agricultural representative.

# MOTORISTS DODGE HAS THE ANSWERS TO QUESTIONS YOU FREQUENTLY ASK

**Q** *Should I use a standard or premium gasoline in my car?*

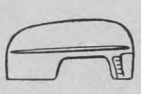
**A** That depends on the make of your present car. All new Dodge engines are designed to operate with maximum performance and top efficiency with ordinary gasoline.

**Q** *How can I judge the amount of choking my car requires to start under varying weather conditions?*

**A** Unfortunately, you cannot. But new Dodge cars are equipped with an Automatic Electric Choke which makes starting easier—particularly in cold weather, and avoids wasteful over-choking.

**Q** *If my foot brake should fail will my parking brake still operate?*

**A** Yes, if you own a Dodge. The Dodge parking brake is completely independent of the foot brake, operating on a drum of its own fastened to the propeller shaft. When the propeller shaft is locked, the wheels cannot turn. In many cars the parking brake operates on the two rear drums of the foot brake.



**Q** *In face of the high cost of body repairs, why don't all cars have detachable fenders?*

**A** It would seem that some manufacturers have sacrificed the practical for styling. All Dodge fenders are bolted on and are easily removed to facilitate replacement or repair.

**Q** *How can I stop my gas lines from clogging with dirt and water?*

**A** With most cars there's no sure way. You might try draining and cleaning out your tank from time to time. In cold weather always keep your tank well filled as this reduces the amount of condensation. With a 1951 Dodge, of course, you cannot experience this annoying trouble. The new Dodge is equipped with an Oilite fuel filter located in the gas tank which keeps the entire fuel system free from dirt and water. It's self-cleaning, too, from the swishing action of the gas in the tank.

**Q** *Why is rear seat riding in some cars so tiring?*

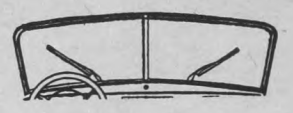
**A** That's because a low, sloped-back rear seat places you in an uncomfortable position without support under and behind the knees. Dodge chair-high seats, both front and rear, give you proper knee and back support—let you ride long distances in comfort.


**Q** *How can I best protect my engine from the dirt and abrasives which collect in the oil?*

**A** You should install an efficient oil filter, if your car is not so equipped. Not only are all Dodge Coronet and Regent models equipped with a highly efficient Micronic Oil Filter as standard equipment, but all Dodge models give you added protection with a Floating Oil Intake. This type of intake draws only the clean oil from just below the surface, preventing both surface foam and bottom sludge from entering the oil lines.

**Q** *Should I buy a set of the special tires or tubes advertised as protection against blowout?*

**A** Many motorists would not be without them. Dodge owners, however, have an exceptional safety factor in "Safety Rim" wheels. Protective ridges on these wheels hold the standard tire in place in case of tire failure, reduce the danger of loss of control and allow safe, straight stops.

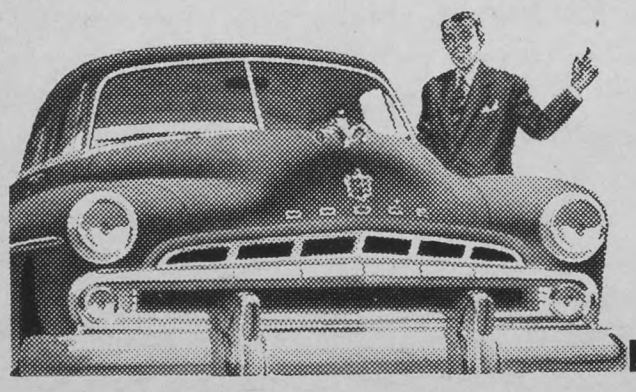


**Q** *Why do my windshield wipers slow down and sometimes stop working when I accelerate my engine—often when I need them most?*

**A** That's a little technical but here's the answer in simplest terms. Your wiper is a vacuum type, operated from the vacuum in the intake manifold. This vacuum is highest when the engine is idling—lowest when the engine is under full load, such as when you call for fast acceleration, so your vacuum wipers slow down. With the new Dodge cars you do not experience this trouble as they are equipped with constant-speed electric windshield wipers.

**Q** *Is there any real difference in the various types of air cleaners?*

**A** Yes, there are vast differences. For example, all Dodge cars use a heavy-duty oil-bath air cleaner. In "dust storm" tests, this type cleaner proved much more efficient than ordinary mesh-type filters even at the start. And, after 2,000 miles of driving it proved to be still 98% efficient, or nearly double that of other types of cleaners.



These are some of the reasons for

## DODGE DEPENDABILITY, COMFORT AND ECONOMY

and why we say *"Drive a Dependable Dodge for 5 minutes and you'll drive it for years!"*

## *Wise One*

*Continued from page* 9

Sometimes though, one that had escaped a hawk's talons, or another hooked up on the barbed wire, would emit sharp squeals of pain. No sound was sweeter to Lona's ears.

FALL colored the prairies. The dust of threshers carried to the smoky horizon. The wind made tracks in the silver willows. On Windigo Hills the saskatoon bushes looked like purple heather in the sun. The days were clear and languorous; the faraway foothills a smudge of scarlet and yellow.

The pups had been taught to hunt singly, and in pairs. Their father showed them steel traps and a set where a coyote writhed in agony. From that set came the tantalizing odor of the most deadly coyote lure of all—urine mixed with musk . . . They understood that farm dogs would come out by moonlight to yip and play; that cars rolling down the highway at dusk often killed pheasants, gophers and rabbits.

Now they were on their own.

Lona was loath to see them go; she joined them often, to make sure they were managing well. The dog-coyote, taking a brief holiday from family affairs, wandered toward the foothills, to the vicinity of a great sheep ranch he remembered. With his family, he had been discreet—never robbing the same roost two nights in a row, circling the den carefully in case a hidden hunter watched. He yearned for the rough life and its choice spoils again.

Lona was alone, a brooding figure who slept through the sunny afternoons.

Her wound pained before storms; and a new note crept into her howling. When she lifted her cold black nose to the harvest moon, her own blood serenaded in answer.

Sometimes, from an instinct she couldn't fathom, she rolled her body in long-dried cow dung, deriving great enjoyment from the practice. In this, coyotes have their weakness: some writhe on old rattlesnake skins, others on ground saturated with skunk smell . . .

The nights grew sharper. Men tramped the stubble fields, shooting Hungarian partridges and pheasants. Lona found the wounded, and was grateful.

The rattlesnakes crawled deep into crevices in the rocks. The gophers whistled no more on the tawny sandhills. The weasels were turning white: only a circle of brown around the eyes, a streak of brown down the center of the back, remained of their summer coats.

A YOUNG man with a gun came finally, working upwind.

It was a tasteless day in November; snow hung drearily in a troubled sky. The hunter was scarcely older than Lona; he had grown up in the same country; had seen her, often, when he was just a kid, crossing the flatlands to the Windigo Hills. He thought of her only as a cunning and cowardly coyote, and might have been surprised if some biologist had told him how many thousands of jackrabbits and gophers Lona and her offspring had consumed in her lifetime.

He sat himself on a rocky ledge and pulled a shiny tin whistle from his pocket. When he blew, it emitted a high-pitched squeal, like that of a jackrabbit in death pain.

More than a quarter of a mile away, Lona heard. Her ears lifted loosely. Her straw-yellow eyes glowed. She opened her mouth to listen again.

Once more the piercing rabbit cry sounded faintly on the wind. The lithe body, darker with its winter fur, loped, straight and true, through the first grey blobs of snow. Far away, another coyote howled mournfully . . .

* * *

From the cornerstone of many a great building, stone lions look down on the passerby. In Salt Lake City, a stately monument of a sea gull commemorates the Mormons' gratitude for the timely arrival of those birds once in the long ago when grasshoppers threatened Utah with famine. Shrines have been erected to the memory of great monkeys, crocodile gods, sacred cows. Even the geese that warned soldiers of the approaching enemy have a niche in history. Lona's apotheosis was acknowledged in a more humble record.

In the two-by-four post office at Windigo Hills, the postmaster put the finishing touches on a large photograph of Lona lying on the high rocks; a boy with a gun stands beside her, smiling. The postmaster, who prided himself on his photography, carefully printed a legend below:

*"Lona—the most famous coyote in western Canada.*
*Age (est.) 14 years. Shot by J. Bates, age 17 yrs."*

There was hardly room on the knife-scarred and dirty wooden wall for the display. The postmaster tacked it, finally, above a bulletin from the Department of Agriculture warning farmers to poison and destroy the increasing hordes of agricultural pests, especially rabbits, gophers and rats, threatening the economy of the foothills province.

● This feature is furnished monthly by United Grain Growers Limited

# MONTHLY

## Wheat Sales Prospects Are Good

Canada ended the last crop year at July 31 last with a wheat carryover of approximately 180,000,000 bushels. Of that 162,230,000 bushels were in visible position while the quantity still on farms was estimated at about 20,000,000 bushels. The increase in the visible supply over last year was about 63,000,000 bushels.

Although the carryover is large it is not alarmingly so. For one thing the new crop is late and both export and domestic requirements for at least two months will have to come out of the carryover. Wheat sales take place throughout the crop year. It is recognized that if selling is to proceed without interruption the pipe lines of supply must be kept filled and a year-end carryover of approximately 100,000,000 bushels is no larger than is desirable.

This year's carry-over would have been considerably smaller except for the great preponderance in it of low grades, suitable only for feeding. Whatever quantity of high grade wheat was included in the carryover had been sold in advance, and considerably greater quantities of high grade wheat could have been sold had they been available. When last year's frosts impaired the quality of a great percentage of the wheat crop it was recognized that the unusually large quantities of low grade wheat would take some time to dispose of, and inevitably some considerable quantities would have to be carried forward. A reasonably good demand for feed wheat has developed abroad. Although in many countries there is a reluctance to use wheat instead of other grains for feed purposes, that to some extent is being overcome on account of a general world shortage of feed grains. To what extent that will be overcome by this year's production of corn in the United States and in Argentina is yet to be determined. It seems now to be expected that the corn crop in the United States will not exceed three billion bushels, and will be somewhat less than might be absorbed on account of the high livestock population now in the United States.

It is too early yet to estimate how much wheat Canada may succeed in exporting during the current crop year. At all events, however, a good export demand awaits the high grade wheat of this year's production as soon as it can be got into export position.

Sales under the International Wheat Agreement this crop year have been higher for both Australia and the United States. Canadian sales have lagged behind for one main reason, the scarcity of milling grades. At the beginning of the crop year European countries were somewhat hesitant to make commitments. They held off for a time rather than accept the addition of a six cents carrying charge imposed this year by exporting countries to the maximum Agreement price, which had not prevailed last year. That reluctance appears now to have been largely overcome. So far the United States has sold 34 million bushels under the International Wheat Agreement or about 20 million bushels more than up to the same date last year.

There is every reason to believe that very substantial export sales will be registered by Canada within the next few months. One important factor is the tenseness of the international situation, which makes various importing countries willing to accumulate supplies of imported wheat to the extent of their storage capacity rather than risk a shortage later in the year.

## The Transportation Problem

Undoubtedly the size of this year's grain crop in western Canada is going to create storage problems at many points. These are accentuated by the fact that about 100,000,000 bushels of old crop grain were still in store in country elevators at July 31, with some substantial deliveries yet to be made by farmers.

Difficulties are aggravated by the situation at lakehead terminals. A multitude of different grades accommodated there has meant that many different bins have not been filled to capacity and in consequence the terminals have not been able to accommodate their full nominal capacity. Space is being taken up by some millions of bushels of low grade wheat which may be slow in moving.

Widespread fears have been expressed lest the Canadian transportation system might prove to be inadequate to the grain load it will be asked to carry. Undoubtedly there is a serious problem which will require concerted effort of all concerned to overcome. Efforts in that direction, under government guidance, are under way. There are several different aspects to the transportation problem, to be separately considered.

The vessel situation on the Great Lakes occasions concern. Iron ore traffic, both from Duluth and Port Arthur, has been making tremendous demands upon lake freight space. That ore is needed in order to keep eastern steel mills working, and in turn capacity production there is necessary to avoid any interruption to the production of munitions called for by the defence efforts of the western world. Those facts have been given so much attention that some offsetting facts may properly be mentioned.

Contrary to the general impression there has been a larger eastbound movement of grain from lakehead terminals during the navigation season this year than was the case last year. Lake vessels themselves have moved more grain this year than last, while in addition all-rail shipments from the lakehead were substantially stepped up.

Some new lake vessels have gone into commission this year, both for grain and for ore, and other new ones are under construction.

The lake transportation season for grain extends to a later date than is the case for ore. Toward the end of the season there can be expected the transfer of a good deal of lake space from ore to grain. With the first onset of wintry weather ore freezes, both in railway cars and in shipping piles on the docks. Although steam is used to some considerable extent to thaw out the ore, the greatest demand for its shipment occurs before this difficulty is experienced. Vessels which have been carrying ore may make one or

# COMMENTARY

more trips with grain, while in addition they can be filled up with grain to lie in their holds for winter storage, either at the lakehead or at eastern terminals.

There is a large volume of space, currently unused, in eastern terminals. It is desirable to fill this up before the close of navigation. To do so makes such grain available for export during the winter season, but it also eases the strain on western storage space.

The railways, with full employment available for all their boxcars, are naturally reluctant to load these with grain for eastbound shipment much more rapidly than cars can be unloaded at the lakehead. Once, however, that space is available there they can and no doubt will provide sufficient cars for a very large movement from country elevators. In the past, and more especially during the late months of the past winter, they have shown their capacity to move a very large volume of grain within a short time.

Fortunately western Canada has more than one outlet for export shipments. The Vancouver route is likely to be much more important this year than ever before. Vancouver provides the cheapest and most convenient port of shipment for Alberta grain, a fact of increased importance in view of Alberta's large prospective production this year. Fortunately the demand for grain from that port is large, both for trans-Pacific shipment and for movement to Great Britain and continental Europe through the Panama Canal.

When the Vancouver route was first opened the general expectation was that shipments from that port would mainly be made during the winter months when the St. Lawrence route was closed. Now Vancouver can be expected to be kept busy the year round. It is only when ocean shipping is scarce that it tends to be concentrated on the short trans-Atlantic crossing. Vancouver ought to ship more grain this year than ever before. All that is necessary to that end is for the railways to keep up a steady movement of cars from Alberta elevators.

Some increase is possible in the quantity of grain shipped through Churchill. That, however, cannot give much early relief, because only limited quantities of this year's crop can reach Churchill before the season of navigation ends.

Appointment of a transport controller to deal with the situation may be made. Transportation experts are inclined to think that any unnecessary interference with the operations of railway and steamship companies would be unfortunate. It is contended that the railways can do a better, more efficient job with their available equipment if they are left free to use their own judgment as to its employment. So far as the lake situation is concerned, if the government can see its way clear to have the ore movement slowed down, that can best be arranged with the companies which ship the ore.

It is not only in Canada that transportation problems are felt. Grain is backing up at shipping points in the United States and on farms because the railways cannot supply cars as rapidly as asked for. On the Great Lakes the coastal shipping laws of the United States usually prevent vessels of Canadian registry from carrying cargoes between two ports in the United States. These regulations are being relaxed and an open invitation extended to Canadian boats to handle any available cargoes.

### U.S. Wheat Production

The official estimate of the wheat crop of the United States by the U.S. Department of Agriculture is for a 1951 crop of 998,286,000 bushels. This is the first time in eight years in which wheat production of the United States has fallen below one billion bushels. During several years that mark was exceeded by a considerable margin while last year's production was barely one billion bushels. This year the winter wheat crop experienced considerable damage both from drought and insects and for a time it was thought production would be very severely impaired. Subsequently extensive recovery was reported, but this proved to have been overestimated.

### Grading of 1950 Crop

The low grading of the crop of 1950 is shown by statistics published as to inspections during the year which ended on July 31 last. A total of 184,945 cars of wheat were inspected as follows:

| | |
|---|---|
| 1 Nor. | 8,885 |
| 2 Nor. | 30,407 |
| 3 Nor. | 28,607 |
| 4 Nor. | 20,108 |
| No. 5 Wheat | 23,794 |
| No. 6 Wheat | 18,664 |
| Feed Wheat | 3,762 |
| Tfs. | 33,259 |
| All Others | 17,459 |

Over 50,000 cars are included under "Toughs" and "All Others." Damp grades are included in the latter. While details of actual grading are not published in respect of toughs and damps, broadly speaking proportionately more of the lower grades were found in these categories than with dry wheat.

For oats the grading was as follows:

| | |
|---|---|
| 1 C.W. | 1 |
| 2 C.W. | 169 |
| Extra 3 C.W. | 1,555 |
| 3 C.W. | 5,364 |
| Extra 1 Fd. | 5,777 |
| 1 Fd. | 10,071 |
| 2 Fd. | 1,216 |
| 3 Fd. | 210 |
| Mx. Fd. | 16 |
| Tf. | 10,151 |
| All Others | 1,661 |
| Total | 36,191 |

Barley grades were as follows:

| | |
|---|---|
| 2 C.W. 6 Row | 693 |
| 3 C.W. 6 Row | 6,703 |
| 4 C.W. 6 Row | 830 |
| 2 C.W. 2 Row | 37 |
| 3 C.W. 2 Row | 320 |
| 2 & 3 C.W. Yellow | 20 |
| 1 Feed | 7,084 |
| 2 Feed | 4,948 |
| 3 Feed | 2,639 |
| Tf. | 10,276 |
| All Others | 4,492 |
| Total | 38,042 |

# Peril in the Middle East

***This region was the seat of political uneasiness long before the founding of Israel or the Anglo Iranian Oil Company***

*by* **DON PERETZ**

SINCE the end of the nineteenth century when Napoleon invaded Egypt, struck out across the Sinai Desert and up into the Levantine littoral, the defence of the Middle East has for England been second in importance only to the defence of the British Isles themselves.

In these hundred years the Middle East was the chief critical frontier region between the central land-power system of Russia and the sea-power system of Great Britain. During this time England was in *de facto* control of the area. But she fought constant Russian attempts to push down through the Caucasus into the Persian oilfields and through the Dardanelles into the Mediterranean. Before the first World War she waged diplomatic battles against the penetration of German railroads through Turkey and down to the Persian Gulf. During the war British troops fought German-led Turkish armies which tried to capture the Suez Canal and cut England's lifeline to India. During the Second World War General Rommel almost succeeded in capturing the canal.

Today the Middle East floats on the largest concentration of known oil reserves. Although American oilfields contain nearly a third of the world's reserves, the Middle East is known to have 42.1 per cent. Russia and its satellites have less than a quarter of the oil reserves known to exist in the area. Post-World War II Russian attempts to squeeze oil concessions out of Iran intensified American determination to fill the strategic vacuum as quickly as possible.

Russian strategy directed at the Middle East is motivated by the desire for a share in the area's oil reserves and fear of encirclement. The USSR would like to increase its potential oil supply, which is only a third of America's, by obtaining a Persian concession. Fear of Russian intervention in its internal affairs has stymied any grant from Iran to its great power neighbor across the northern frontier. The tendency of the USSR to think in terms of encirclement from which it would like to break out, means the Anglo-American airfields in the Middle East appear as forward bases of the "encircling" powers threatening one of its most vulnerable areas. Russian Middle East policy accordingly aims at softening the area up and communist propaganda there constantly harps on Anglo-American imperialism, making its appeal as much to extreme nationalism as to the underprivileged masses.

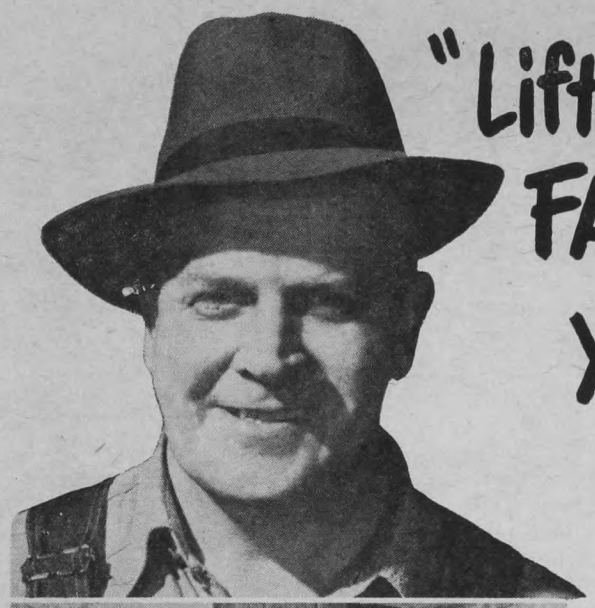
ACTUAL communist strength in the Middle East is today negligible. In all countries of the area except Israel the communist party is illegal. In Israel only 3.4 per cent of the people voted for the communist ticket in the last election. Communist underground movements are known to exist in the other Middle East nations but they have only a handful of members. The only Middle East communist stronghold is in Azerbaijan, the northwest border province of Iran which was occupied by Russian troops until 1946. Some Russian influence is known to exist in the Russian Orthodox ecclesiastical structure of the area minority in northern Iran. However, the relative insignificance of actual communist "strength in being" in the area gives little indication of the potentialities for its development or of the relative weakness of the area vis-a-vis Russian strength.

The area's military defence forces could not prevent Russian tanks from penetrating to any point in the Middle East within a matter of days, either by land or by air-borne operations. The only military force of any effective size is the Turkish army of between 400,000 and 540,000 troops. Iran has the next largest army—136,000 troops. The other military forces in the area are Lilliputian. The ineffectiveness of the Arab state armies was demonstrated in the war with Israel when no more than a total of 90,000 Arab troops could be thrown into battle and were defeated by Israel's makeshift army of 75,000. Although several of the armies mentioned receive advice, training or equipment from Great Britain or the United States, not one of them, not even the Turkish army, compares to a modern military force in the sense that it influences world power politics.

THE most effective military potential in the area today is in the Royal Air Force air bases at Habbaniya in Iraq, in the Egyptian canal zone, on Cyprus, and at Amman in Jordon. Other possible air bases for Anglo-American use are at Payne Field near Cairo, and at Daharan in Saudi Arabia, and in Turkey. But even these bases have become so antiquated by postwar developments that they would soon be lost in the event of a major war.

Existing social, economic and political conditions in the Middle East make the creation of any situation of "strength in being" impossible in the near future. Internal dissatisfaction of minorities and inter-Arab dynastic rivalries prevent the formation of a united front.

Since nationalism first set alight the political imagination of the Arabs, there has been a constant play of Machiavellian tactics to win leadership of the movement. For years the clash for Arab leadership between Ibn Saud of Arabia, the Hashemite dynasties of Iraq and Jordan and King Farouk of Egypt has reverberated through the area. Even the Arab League, established in 1945, has failed to make headway in bringing about a substantial measure of unity. After the disaster of the Israel war all suggestions emanating from the league for a united military front were drowned in the backwash of national pride. No Arab nation wanted to give up the absolute control of its own military forces. Jordan was worried about the growing strength of Syria and Syrian troops were constantly on the look out for a military coup from Iraq. Iraq still remembered its border "incidents" with Saudi Arabia. Distrust of some immediate Arab neighbor is more of a significant factor to each of these nations than fear of aggression from outside the Middle East.



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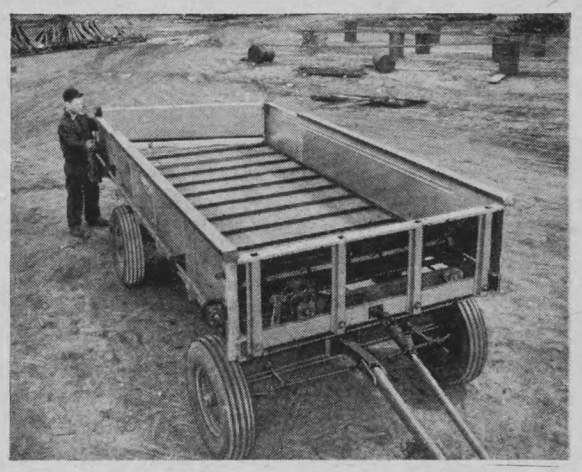

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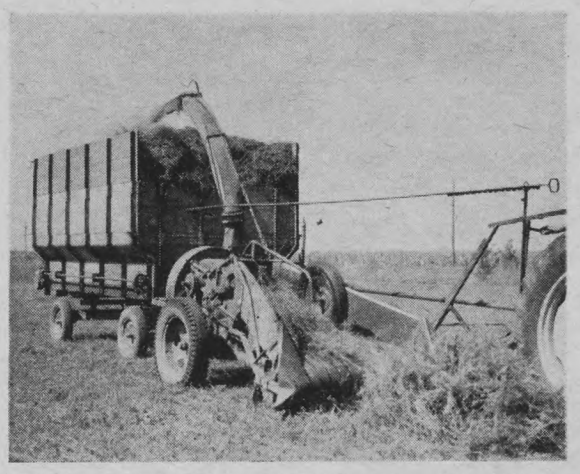

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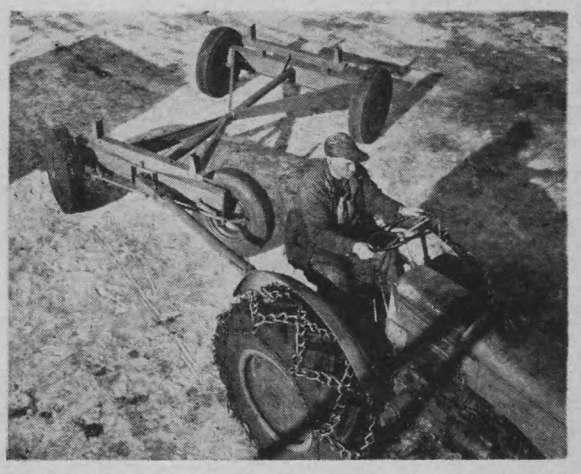

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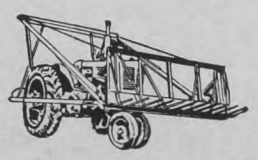

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# Beekeeping as Main Enterprise

***Large scale honey production requires a number of small refinements to keep up a high rate of production per hive***

*by* **J. T. EWING**

IN most provinces beekeeping is one "egg" in a basketful. Only in Saskatchewan and to a lesser extent, Alberta, most of the honey is produced by men who have little other source of income.

One of the larger operators in Saskatchewan is Robert Hamilton who lives on the outskirts of Aylsham. He figures on running 1,000 colonies or more, although he cut down the number during the past two years when the market was unstable. This year he has 1,500 colonies including 500 overwintered in his bee cellar and 1,000 packages that he brought by truck this spring all the way from California.

Last year he extracted 130,000 pounds of honey produced by his 850 colonies. His average of 154 pounds per colony was well above the provincial average of 118 pounds. That was in addition to 50 or 60 pounds left in each overwintered hive for winter feeding.

"Frosts pretty well determine our honey flow in this northern area," Mr. Hamilton told me when I visited him fast fall with Ed Bland, assistant provincial apiarist. "A frost which cuts short our honey flow is usually about the only thing that keeps us from getting a good honey yield. If the colonies are built up to full strength not later than July 1 we will usually get good production. Our spring management is carried out with that end in view.

"We take the bees out of the cellar about the first of April. As soon as the ground is comparatively free of snow it is time to take them out. If there is too much snow there will be a heavy loss from bees settling on snow and unable to rise again."

Last year was the earliest he has ever taken them out—March 24. The snow went very early. He said that when he lived at Grenfell, 200 miles south, he could take the bees out of the cellar two weeks earlier, on the average, than he can at Aylsham. He moved to Aylsham in the spring of 1939.

The first pasture in the spring, Mr. Hamilton explained, was willows. They usually did not bloom until after the last week in April. Willows in some years produce quite a honey flow, especially in wintered colonies which are usually strong enough to collect stores right away. The wild shrubs, fruit blooms, choke and pin cherries and even poplars and maples produce some nectar.

"This takes us to the end of May when dandelions bloom," Mr. Hamilton said. "Some years we get only pollen, other years we get both pollen and honey. Wild roses then come about mid-June and carry through to the start of the honey flow. All early honey stores are used for building up the colonies. No surplus is produced."

Much of his pasture in the south was in the Qu'Appelle valley. There the crocus—a pollen producer—was the first flower. It came about the first week in April.

"This country now is becoming more like the south," he declared. "In the early days in the south the bees got only wild flowers. The main crop flowers were asters, goldenrod and wolf willow. Later sweet clover was more common.

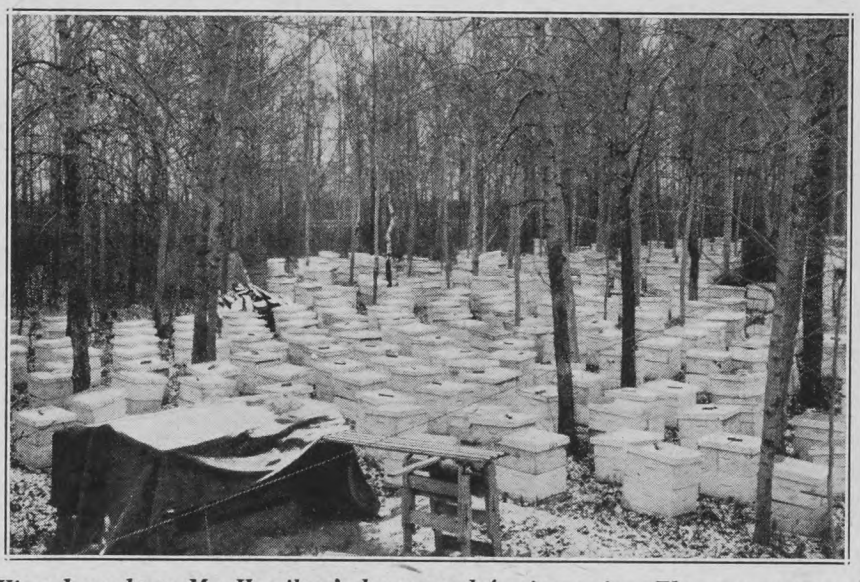
"When we first came to Aylsham we had three flowers: sweet clover, alfalfa and fireweed. Now we are down pretty well to one crop—sweet clover. Our alfalfa wouldn't set seed so we plowed it down. Fireweed disappeared as the land was broken. We still can get fireweed north of Carrot River if our pasture runs out here. It means a long trek, though, about 35 miles."

As soon as the roads dry up enough in the spring for truck travel the bees are trucked to the bee yards. He has about 30 within a radius of 15 miles.

Each bee yard is rented from a local farmer, usually a half acre of waste land sheltered from north winds. He doesn't want shade for them as the sun is seldom too warm.

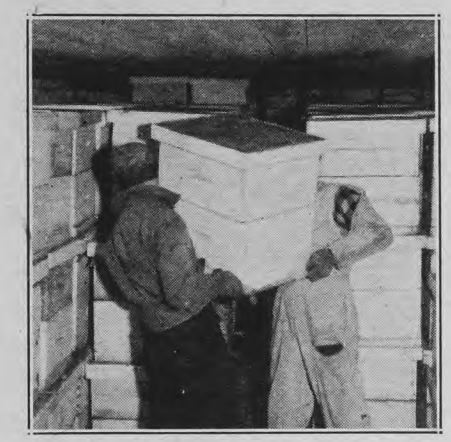
The number of colonies in each yard varies from 30 to 100, depending upon the amount of adjacent pasture. He wants the pasture to be within a mile if possible—the nearer the better. The less distance the bees have to travel for nectar the more they can store.

"We favor yards along the river in the spring because there are plenty of



*Hives brought to Mr. Hamilton's home yard for inspection. The strongest ones are overwintered.*

willows there and many wild shrubs," Mr. Hamilton told me. "When the clover blooms we move the hives to open country where the clover is. In the river yards we have 50 to 100 hives. If there is clover pasture near them we move half the hives to the open country and leave the rest by the river."



***Bill Hamilton and a helper fill the cellar with colonies for overwintering.***

AFTER the bees are in the yards he makes the rounds weekly to see that they are building up satisfactorily. The queen is, of course, the center of the colony's activity and he sees that she is laying well. When the honey flow starts the main job is to see that there is plenty of room in the brood chamber and for storing nectar.

"Preventing swarming is one of the main objects at this time," Mr. Hamilton explained. "It is a natural tendency of bees when they become prosperous and congested."

He has sort of a master or check colony set on a scale in the home yard. Every morning its weight is checked. A good indication of the amount of food being brought into the hive is given by the increase or decrease in the weight of the hive.

"We keep charts of these weights every year," he said. "By examining them we can tell what kind of a season we have had—how much cool, cloudy weather, what date the honey flow began, etc.

"If the check hive is gaining 15 or 20 pounds for three or four consecutive days we know we'll have to go around the yards sooner than usual to provide extra room. If the hive is losing weight every day we know that all the colonies need more feed."

A good hive during the honey flow may gain as much as 30 pounds in 24 hours, Mr. Hamilton told me. One day last summer, he said, the check hive gained 30 pounds and 28 pounds during each of the next two days.

"When this happened we knew it was time to get more supers on all the hives to provide more storage room. Normally it would take a week to bring in that much nectar.

"On the other hand if the hive gained only five pounds or so in a day during normal weather we knew it was time to guard against swarming."

One of the joys of beekeeping in this more newly settled area was periodic invasions by bears. Last fall when the honey flow was over but the bees were still in the yards, a bear had visited one yard and strewed hives around so that only eight were left standing out of 45.

"We have tried electric fences but they didn't help," he declared. "Bears don't seem to feel the shock through their long hair. Not a year passes that one or two do not get into a yard."

Fieldmen from the apiary division of the plant industry branch, provincial department of agriculture, visit Mr. Hamilton sometime during the summer. They check all the apiaries in the province to keep them as free as possible from disease. They did not find any disease among his bees.

EXTRACTING is really the busiest time of the year. This business is a family affair. During most of the year he and his son Bill and one helper do the work. But when extracting time comes two extra men are needed to help carry the supers full of honey for extracting. His wife and his daughter, Dorine, and two extra girls help in the honey house. The extra help is taken on about August 1.

The next two months are busy ones for it is quite a chore to extract and prepare 130,000 pounds of honey for market.

Equipment in the extracting house is arranged to provide ease of handling the honey. The supers are brought in from the yards and stored overnight in the heat room where the temperature is maintained at about 85 degrees. This makes it flow easily from the comb during extraction.

Four or five supers are brought into the extracting room on a hand truck and placed near the extractors. The supers are uncapped with a steam uncapping knife over the capping dryer, then placed in one of the two 50-frame extractors. It takes about 20 minutes to extract the honey from the 50 frames. While one extractor is working the other is being filled so that one is always in motion.

The cappings with the small amount of honey clinging to them fall into the capping dryer where they fall to the cone shaped revolving bottom. Centrifugal force throws the honey to the sides where it drains into a sump and is pumped into the clarifier.

Honey from the extractors also goes into the sump and is pumped into the clarifier. Here it is heated enough to dissolve any honey that has begun to granulate and the large wax particles float on the top and are strained off.

The honey goes from the clarifier through an Ontario agricultural college strainer and into a series of settling tanks where the fine particles of wax float to the top of the honey, which is drained off at the bottom. Then it goes into the canning tank. Here it is "seeded" with specially

***Robert Hamilton uncaps a frame of honey while daughter Dorine looks on.***

granulated honey before being "canned."

"Honey granulates sooner or later," Mr. Hamilton said in explaining about "seeding" the honey. "The lower the temperature is the more finely granulated it will be. But if clear honey is 'seeded' with some finely granulated honey the entire lot will become finely granulated just like the 'seed,' even though it is held at a comparatively high temperature.

"So we granulate some of the honey at a low temperature then add small amounts to that being canned. About 30 pounds will be enough 'seed' for the 1,800 pounds which the canning tank holds. Placed in containers the honey will granulate uniformly after a few weeks."

Containers used are one pound cardboard cartons and two, four and eight-pound tins. They are marked with his trade name, Northern Blossom Honey.

Mr. Hamilton overwinters his strongest colonies. Last winter he put 600 hives into his bee cellar. He had rather high mortality, only taking out 500 live colonies this spring. He believed that this was because the honey had a greater moisture content than usual.

IN preparing the bees for winter storage all of them are brought in from the bee yards. As each hive is taken off the truck it is weighed and the weight marked on the side of the hive with a piece of chalk. A hive weighing 125 pounds he considers to be pretty well all right for overwintering. Colonies weighing much less than that are gassed without further examination.

"The lids are taken off the heavy ones and the clusters are examined," he explained. "If the cluster is pretty well down in the super we know it is pretty good. If it is near the top we know most of that weight is pollen or the bees wouldn't be up there. So we discard it without looking further.

"Sometimes in a two-storey colony the bees do not have enough feed and part of the cluster is in the upper box and part in the lower box. When this happens we pry the two boxes apart and insert a small block of wood. After 24 hours all the bees are clustered around their queen in the upper super. After removing the empty super we put on another one containing a supply of honey."

The ideal place for a cluster, Mr. Hamilton said, is between the two boxes, just at the lower edge of the food. It moves up as it eats the honey during the winter.

Queenless colonies are fairly easy to pick out without looking through each one, he finds. Where a super contains one cluster at one side and another at the other side, it is a sign of a queenless colony and is put aside to be gassed later.

The home plant contains only about half Mr. Hamilton's equipment, which he values at about $30,000. For a few years the other plant, which is located at Nipawin, about 35 miles northwest, was leased on shares. This year, however, Bill is taking it over and the combined apiaries now total about 1,500 colonies.

This spring Mr. Hamilton and Bill went to California and brought 1,000 packages of bees back in their truck. If it is an average season they will extract about 250,000 pounds of honey this fall.

# Honorable Retirement

***Two old sheep dogs with a fine record behind them now put in their last years herding the poultry***

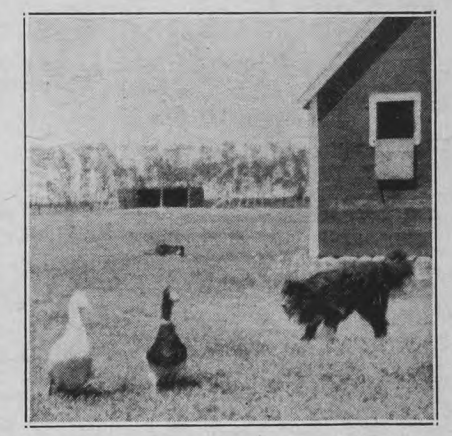
*by* **M. O. MYERS**

ALBERT HELLER, of Coronation, Alberta, will let his two famous sheep dogs, "Boy," and "Fly," drift into retirement at the ages of ten and eight years. He has gone out of the sheep raising so he does not need them as much. During their years of usefulness they have performed many duties that have brought them widespread recognition.

This is especially so of Boy. Albert bought him at the age of six months, for five dollars, from George Sutherland, owner of "Jerry," the trained sheep dog who held the championship for trained sheep dogs for years. Boy is one of Jerry's pups. Fly, the female, is a descendant of the famous "Martin dogs." She cost him ten dollars at the age of eight months.

From these two dogs, Boy and Fly, Albert Heller sold pups for about six years and always found a ready market at from $25 to $30 each. Many were sold to a man near Calgary who trained them and sold at quite fancy prices. Albert has sold pups all over Alberta and even some have gone to B.C. He sees some of them occasionally and they are just like Boy. During the last six years Albert has realized a sum of $600 to $700 from the sale of pups from these two dogs.

Training sheep dogs seems to require a certain skill and from the performances of Boy and Fly one realizes that Albert must have it. He begins training them at eight months. When they are younger they seem too lively and foolish. He makes them abide by the rule of "never give up" once he has assigned them a task. There are



***Once a famous sheep dog, "Boy" in his old age has to be content with herding the farm's poultry. Here he maneuvers two ducks to a selected destination.***

times of course when he must allow them to deviate. Such was the case when he told Boy to put the flock of ducks in for the night. It so happened that a rooster was among the ducks. After Boy had spent considerable time trying to persuade the rooster to be housed with the ducks, and the rooster absolutely refusing, Albert told him to let it go.

While herding about a thousand ewes near Walsh, Alberta, Boy really proved his worth. The trough the ewes ate chop from was only long enough to accommodate about 500 so it was necessary to make two feedings. Albert would put the required amount of chop in the trough before letting the sheep in. As the sheep came up the lane he would count them. When 500 had passed he would tell Boy to stop them. The dog would dart in and hold the remaining 500 chop-hungry ewes back until the first ones were finished and he received his master's signal to let them come on.

Albert has herded over 6,000 sheep with Boy alone. When herding sheep on the range in winter the snowbanks cause extra steps and work. Sheep will balk at them. The first few will go in a ways and stop, then the whole herd will be held up. Knowing that sheep will follow the leader, Albert says the next thing to do then is to go up and put the first few through to make a path so the rest will follow. This he would do with the help of Boy. After some time he sent Boy out to bring the sheep in alone but stayed out of sight himself yet where he could see how he made out. Whenever the sheep would stop at a bank Boy would slip out around the herd to see what was the hold-up, then he would cut in behind the first few and edge them through the bank then go back and bring the rest through. Six thousand sheep handled by one dog alone! Is it any wonder that Albert turned down $250 for him?

While these Border Collies are really sheep dogs some can be trained to do other things such as in this case where they herd ducks. Only one in a good many make cattle dogs. Albert has a six months old pup "Bobby" now that gives promise of being a cattle dog.

When asked if there has been any special time that Boy has unexpectedly saved him work Albert replied that the times have been too numerous to mention. However he did relate one that came to his mind on the spur of the moment. One of his heifers had broken through the fence into a neighbor's herd of cattle. He took the saddle horse to try to bring it back but was unable to get it out away from the other herd. After his horse was about played out he gave up and came home. Then he decided to try Boy. He took the dog and set out on foot. Before long Boy had gotten the heifer out and brought her home. He was not severe but steadily persistent and firm.

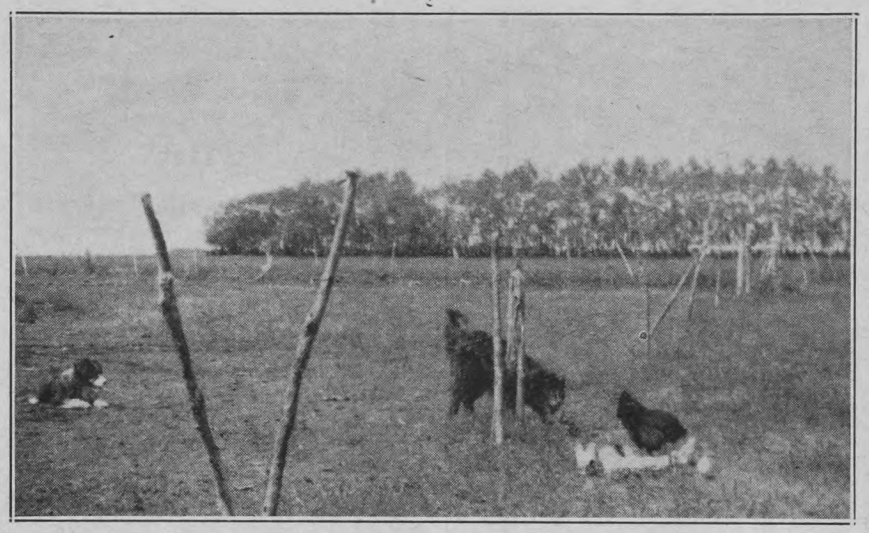
Fly is more timid but if a sheep should get unruly while in her charge she would dart in and roll it over. Not a bite, just a firm hold to show who was sheep and who was shepherd, so to speak.

Another thing worthy of mention is the fact that these two dogs are trained to resist the lure of a rabbit chase. While on duty they will merely look at the rabbits that jump up and flee but will never offer to chase them.

Fly is the one that works for Mom, says Albert. In the fall of the year their milk cows have access to two pastures. Sometimes they will stay in one pasture all day. Other times they will change over during the day. In the evening Mrs. Heller, Albert's mother, would tell Fly that it was time for cows. With no further orders Fly would set out and search the south pasture and if they were not there she would search the other and without fail bring them home.

Albert tells of a time when a litter of tiny pups, eight in number, made a corral around a rooster and held him there for some time. This of course was done on their own. Another time several of a litter were too timid to come out where they could be caught but would hide under a building when anyone was near. One day these little fellows were seen separating a flock of little ducks from the mother chicken hen. They corralled the little ducks and would not let the hen get to them.

But all good things must come to an end and so it is with Boy who is ten years and Fly eight, who have passed their age of usefulness where any great activity is involved. While still able to do the odd light work Boy is getting pretty stiff in the joints and can't take it as he used to when it comes to the nimble moving so necessary for a dog herding animals. It is still very interesting to watch him herd ducks, separate them, keep one flock of them from mixing with the rest, etc. He can still put the old chicken hen and her brood of little ones in the coop at night without being told.



*"Boy" as he brings the chicks to their pen. "Bobby," a young apprentice, looks on from the rear.*

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IT is now claimed that water suitable for irrigation can be obtained from the salty sea or ocean water. Refining is done by converting the sodium chloride in the ocean water into sodium nitrate, which remains in the irrigation water and would add plant food to the soil. Silver nitrate is added to the ocean water in an agitator. A by-product is silver chloride, which can be recovered from a settling tank.

[Guide photo

***These Hereford females on the R. C. Sheehan farm, Carstairs, Alta., were just looking—not posing—but they accidentally did very well, indeed.***

# Home Is Best after All

***His diversified Alberta farm was the most satisfying thing he saw after a month away from it***

WHEN I visited the R. C. Sheehan farm northwest of Carstairs, Alberta, he had just returned from a meeting of the Municipal Service Board, and the family had only recently returned from a month spent in the United States, revisiting his original home district in Illinois. During that time, he had travelled through Montana, Nebraska and Iowa and intermediate states. He was much impressed with Iowa, but he was disappointed with that part of Illinois which he visited.

Mr. Sheehan was inclined to doubt whether there exists anywhere in the United States, that he had seen, a strip of country of equal size and quality of land to that found between the U.S. boundary south of Calgary and the city of Edmonton.

He was obviously glad to be home again. He had come to Canada in 1929, and farmed at Beiseker for a few years. He liked dry farming, but he was not sorry that he had come to Carstairs. He had bought a half-section in 1937, a third quarter in 1940, and rounded out the section in 1944.

The soil is a very dark, chocolate loam, and he thought that land in the area was worth perhaps $75 per acre, though it was hard to tell what the going price was when no land was being sold. The district had been largely settled by Mennonites from Waterloo County, Ontario, from 1900 on.

"I am becoming more and more interested in conservation as time goes on," he said. He thought the municipal service board idea was a good one, but it was difficult to get municipal councils to move as progressively as one might wish sometimes. It cost the municipality $40,000 for snow clearing; and snow protection belts along roadsides seemed to be called for. He himself had planted a belt of white pine and poplar, but would not plant poplar again because the lower inner branches die off. He had had a little trouble with erosion from a gully in a neighboring field which ran onto his land. Part of the area was seeded down in 1949, and a crop of hay taken off in 1950. When the balance of the area was seeded in wheat, it did not come through well because of dry weather.

Mr. Sheehan said that he could not seem to plan regular crop rotations. Crops, prices, and machinery were changing so rapidly that long-term planning was difficult. He usually had about a third of his crop land in fallow, because he could not control the Canada thistle and wild oats without it. There were over 90 acres of grass, half for hay and half for pasture, and about ten acres of alfalfa which had been down for ten years. This would be plowed and reseeded.

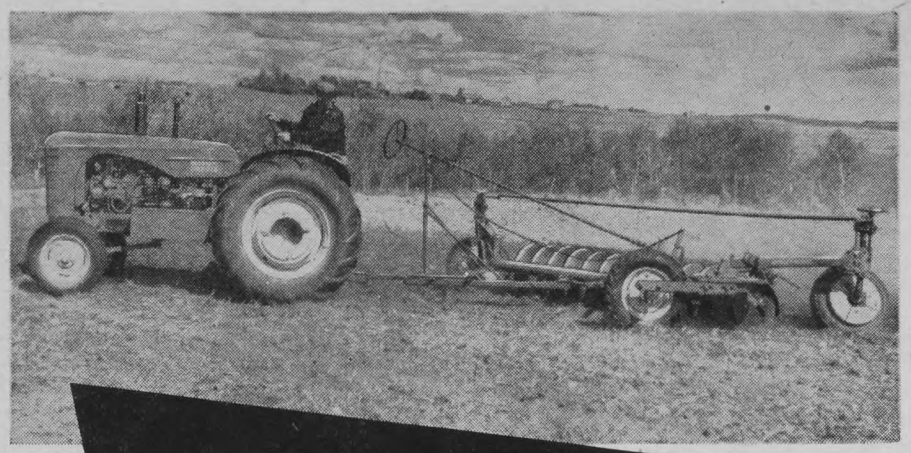
Spring plowing in the area is quite common. Plowing is quite shallow, to turn under wild oats. Couch or quack grass is also a problem, and tillage also has to take into consideration the fact that in some years there is almost too much straw. Occasionally, Mr. Sheehan has to put the one-way over the land two or three times before the duckfoot cultivator can get through. Whenever possible, the latter implement is used.

Garnet wheat is grown because it grades higher than Red Bobs, and makes more money. Mr. Sheehan's son and daughter each had seed plots, one of Garnet and the other of Saunders. The Garnet showed a little thicker with darker color, but the Saunders appeared to show less straw and bigger heads. For coarse grains, Olli barley and Laraine oats are used.

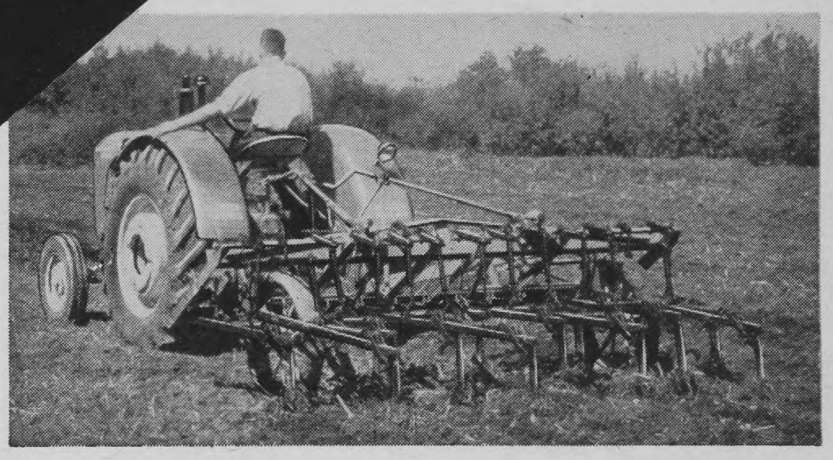
There was a small purebred herd of about 35 head of Herefords. He had not sold any purebreds at the time of my visit, and was still building up the herd. He believed that too many purebred breeders were selling off some of their cull stock to others as purebreds, instead of sending them to market.

He formerly bought and fed calves. He put the calves on a cover crop of oats in the fall, wintered them over cheaply, ran them on grass the following summer, and sold them off the cover crop in the fall.

"Farming today is serious business," said Mr. Sheehan. "We need a crop every year. Costs are increasing as a result of increased machinery, the rise in the cost of living, and the raising of our standards of living. Once the standard of living is raised, we can't go back again." The farm is electrified, and electricity is put to many uses, at a cost of about $15 a month. "This," said Mr. Sheehan, "is too costly."—H.S.F.



# MASSEY·HARRIS DIESELS ARE CUTTING PRODUCTION COSTS



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M-H Diesel Tractors are built in two sizes, the 44-D and 55-D. Chassis and transmission are the same as in the regular M-H 44 and 55 models. Owners are praising these new diesels for their excellent performance as well as their low cost of operation. Here are a few samples of what they are saying:

**1½ Gals. per Hour on Rolling Land.** Paul Reviere, Radville, Sask., writes: "The reason I purchased the Massey-Harris Diesel Tractor was the outstanding performance it had given other farmers in my district. It starts on straight diesel fuel in both warm and cold weather. We have been pulling a No. 25—14-foot 3-row cultivator on steel, with ease. The fuel consumption is approximately 1½ gals. per hour on rolling land."

**1¼ Gallons per Hour.** W. W. Young, Compeer, Alta., writes: "I farm two sections of land and need lots of power. I owned a Model 25 M-H Tractor for 9 years and never had a break. A year ago I bought a 55 Diesel and after using it one season am satisfied it is even a more rugged tractor—and last but not least, it operates on about 1¼ gallons of fuel per hour."

**$130.00 vs. $500-$600 for fuel.** Everette Tufte, Chauvin, Alta., writes: "My 44 Massey-Harris Diesel Tractor has done all the heavy work and most of the light work in raising 440 acres of crop and doing 160 acres of summerfallow several times, plus 1,100 acres of weed spraying. The entire year's work was done on about $130.00 of 18c diesel fuel, whereas in previous years, with less land, my gas tractor consumed from $500 to $600 worth of fuel. My diesel tractor is nicer to handle, easier to start and far superior for hanging on and pulling in a tight spot."

**Cut Fuel Bill in Half.** Thos. A. Kieper, Russell, Man., reports: "My fuel bill for 1950 was approximately 50% less than in 1949. The number of acres cultivated was the same both years. Credit for this goes to the Massey-Harris 44 Diesel which I purchased in the spring of 1950. Further, I enjoyed a full season free from any ignition or carburetion problems."

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*Dynamiting 325 feet of drainage ditch near Buffalo Coulee, and right, a close-up of the ditch after the explosion.*

# Saskatchewan Tackles Drainage

***In the new areas in the northern part of the province drainage is as important as irrigation is to the south***

*by* **J. T. EWING**

"CAN you send an engineer to my farm to indicate the course and depth of a ditch I'll need to drain the big slough on my summerfallow? I have had more water this spring than ever before in 30 years of farming this land."

A surprisingly large number of such pleas have been received this year by J. A. Arnot, director of the conservation and development branch of the Saskatchewan Department of Agriculture. While there has been above average rainfall and snowfall during the past two years that is not the only reason for the abnormal runoff.

This trouble with surface water was so serious this year, however, that Bert Boyson, who is in charge of irrigation and drainage in the conservation and development branch, said recently that at least 75 per cent of their work this summer was concerned with drainage. Some small drainage projects are being expanded. In many places erosion control is going hand in hand with drainage work.

Drainage projects number about 275, of which about 40 are major undertakings. In individual drainage or irrigation projects the government through the conservation and development branch provides any engineering or surveying work that is needed. If a project is big enough to qualify for earned assistance more money is available.

Most of the larger projects are in the east and northeast and even are getting into the northwest part of the province. The water to be drained is mainly surface water in comparison with the southwest where usually only isolated pockets (sloughs) have to be drained.

"A different approach is required in dealing with each type," Mr. Boyson explained. "For draining a slough only one ditch is necessary. But in disposing of surface water both main ditches and laterals have to be put in."

One of the main problems of farmers in the newly settled areas of the province is drainage. Much of the land in the Carrot River region, especially, is so flat that surplus water from melting snow does not readily find its way to local water courses.

Many ditches that have been dug in some of these areas in former years were not properly made or have grown up to weeds and willows. Where sides of ditches were made too steep they have been sloughing off. As a result they are too shallow to carry away the melted snow, or packed full of snow where it has drifted during the winter. Even some roadsides have become dangerously eroded by the crumbling ditch banks.

Ditches now being constructed by the conservation and development branch are made with sloping sides to discourage erosion. They are to be grassed down for the same purpose and to prevent them from becoming infested with weeds and willows.

"In building ditches under the present program," Mr. Boyson said, "we are trying to do a job that will require only a little maintenance work every year instead of a rebuilding job every 20 years or so."

During a recent visit to the Carrot River area a big dragline was seen piling huge mounds of earth beside a deep drainage ditch it was digging about 20 miles northeast of the town of Carrot River. In two 11-hour shifts the operators were digging about 100 feet of ditch.

When completed sometime this month (September) it will be about 6½ miles long and will drain several sections of some of the best farm land in Saskatchewan. It empties into the Petaigan River some 20 miles northeast of Nipawin.

This rangeline ditch, as it is called, has a check system as a further guard against erosion. There is a fall of 55 feet in the 6½-mile length of the ditch. To take the water off safely there should be a drop of only about a foot per mile. This would mean a ditch about 40 feet deep or more at the upper end. To avoid digging so deep a series of checks is put in.

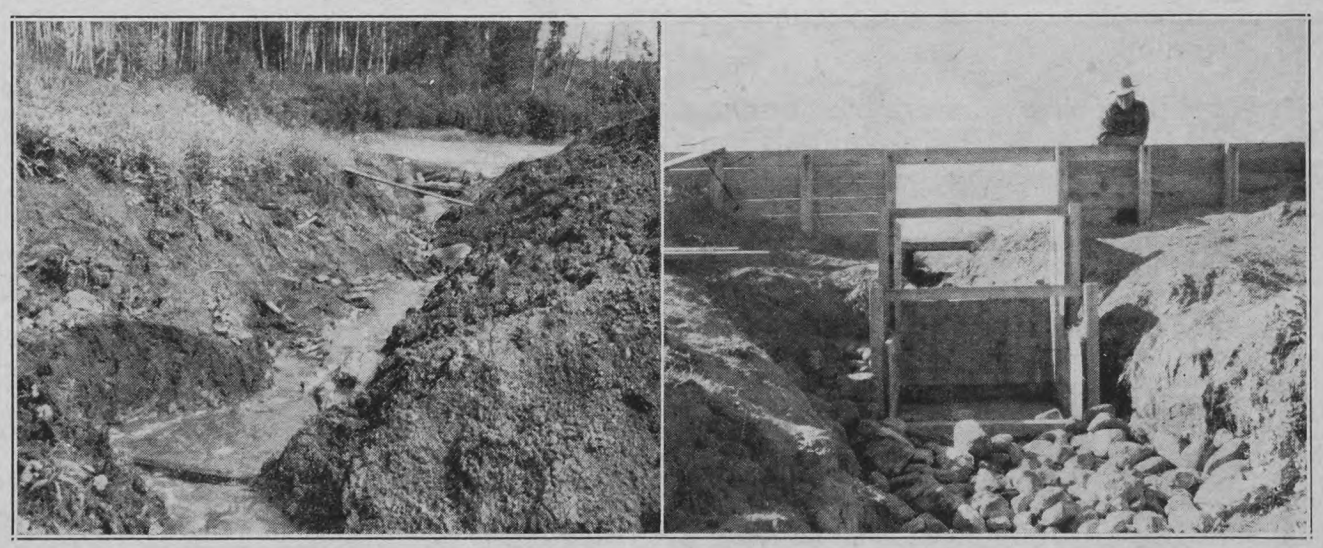
The ditch is designed to carry five feet of water. It is made progressively more shallow until the five-foot depth is reached then a check is installed. This is a concrete spillway that lets the water fall as much as three feet, when the water flows again at the desired rate of drop of one foot per mile.

In digging the ditch the dragline moved about 1,000 cubic yards of earth per day. A dragline was the only equipment that could be used here because the ground was too soft to carry other types of earth-moving equipment.

The shovel piled all of the earth on one side of the ditch and later a bulldozer leveled it off. The result was a good municipal road.

ANOTHER project that will require dragline excavating is the Big Burn project, a few miles southeast. It will drain some low flat land east of the Carrot River. The land of a number of newly organized co-operative farmers (some of those mentioned in last month's Guide) will be drained by this ditch.

The contract for constructing the ditch was awarded early in August. It



*Erosion in drainage ditches in the wooded north is a constant threat. This step down on the Spangler project (right) shows how it may be satisfactorily combated.*

will be 6.3 miles long and has been designed to carry a foot depth of water.

First major project in this area, according to Mr. Boyson, was the Battle Heights ditch a few miles south, in the Carrot river drainage basin. Seven miles of this ditch were dug last year. As less of its route was through swampy land most of it was dug with a scraper or grader blade. Less depth was required than for the rangeline ditch. It was about three feet wide at the bottom and five to six feet wide at the top. Its depth varied from two to three feet. In contrast the rangeline ditch is 14 feet wide at the bottom and as much as 24 feet at the top.

The final 3,000 feet of the Battle Heights ditch were dynamited because frost was making the ground too hard for excavating. When the work was finished three weeks later they were blasting through two feet of frost.

Asked about the comparative cost of dynamiting, Mr. Boyson said that it cost more than machine digging. It was considered to be worth the added expense last fall, however, as they wanted to have it completed to take care of this spring's runoff.

DYNAMITE has been used in a few other projects in the province, Mr. Boyson said. It is usually used in isolated places where it is not easy to get machinery in or where there is too much water for machinery to operate successfully.

"We use special ditching powder for a job like this," he explained. "A line of charges, 12 to 15 inches apart, is put in and a single cap and fuse are used to discharged about a quarter of a mile of dynamite.

"This July when we blasted a drainage ditch in the Buffalo Coulee project north of Kindersley we had to work in mud and water. We used 5½ cases of dynamite in a double line 3½ to four feet apart."

The sticks were about eight inches long and 1¼ inches in diameter and were put down about two feet, Mr. Boyson explained. Five men laid 325 feet in 4½ hours which would have been a day's work for machinery, even if it could have worked in the mud.

The blast produced a ditch three to four feet deep. It was six to eight feet wide at the bottom and 12 to 14 feet at the top. At $18 a case, about $100 worth of dynamite was used.

The Carlea diversion, west of Aylsham, is another project that the department has been asked to undertake. Mr. Boyson said that it is in an old drainage area and the project would require some new ditches and deepening and improving of old ditches.

Water from near Nipawin comes through two natural runs and spreads out near Aylsham so that the town is flooded nearly every spring. The diversion would cut these runs and drain them to the Carrot River, south of Carlea. Approval of the project is still pending.

The projects in the Carrot River area are forming a pattern and a nucleus for similar projects in the whole northeast, Mr. Boyson said in summing up the branch's drainage activities. Some of the other larger projects now underway, such as those at Moosomin, Kamsack, Etomami (southeast of Hudson Bay) may develop into projects similar to those around Carrot River.



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## *One Chore Less*

*Continued from page* 10

is an alley down the middle, pens on each side, and cleaning alley at the back. There are 26 pens in the two barns.

Before the flood, there were 80 sows at the hatchery. It is again up to 75, and will be built up to the original figure shortly. There is no intention of having over 80 sows.

Small pigs are sold at six to eight weeks of age. No feeder receives more than 20 small pigs at a time. Most feeders seem to want eight to ten, and the occasional one wants just a pair to raise and butcher for his own use. When it is set up as a local co-operative, it is expected that pigs will be sold to members only, with the exception of surplus pigs—if there are any—which will be sold to the first comer.

THE system used at Morris of pricing weanlings has been adopted at Arborg. The price of a pair of pigs is equal to 75 per cent of the rail grade price per 100 pounds in Winnipeg, with an added charge of about 50 cents a pig for the cost of inoculations, and castration of the males. If Grade A hogs were selling for $36 a hundred in Winnipeg, the basic price for a pair would be $27. Adding 50 cents a hog to this would give a price of $28 a pair, or $14 each.

It is felt that this system maintains a relation between the price that a feeder pays for weanlings, and the price that he is likely to receive for a market hog.

The Morris hatchery is operated in large part as an experimental project. Pig hatcheries are a new thing in this area, and Fred Hamilton and operator W. Fraser feel that there is still a great deal to be learned.

One thing that they are doing is to buy purebred Yorkshire sows, and cross them with a purebred Tamworth boar. Quite a few feeders and breeders feel such crossed pigs have greater vigor, and Hamilton intends to find out.

One interesting thing has already resulted. A feeder bought ten weanlings, eight crossed, and two straight Yorkshires. The ten pigs ran in the same pen, and the two Yorks came down with rhinitis. The other eight pigs did not contract it. It might mean a lot, or it might mean nothing.

"A well-planned pasture can go a long way in reducing feed costs," says Fred Hamilton. All dry sows are pastured in a field of barley. Additional fields of alfalfa and corn are now being grown, and dry sows will later be pastured on these crops, and an attempt made to determine the most satisfactory type of pasture.

It is intended to make the sows do some winter pasturing. This means they will have to take regular exercise, even during the cold winter months, and so will not get too fat. The fact that corn stands above the snow may make it valuable winter pasture.

Both hatcheries are constantly aware of the danger of disease. As well as regularly inoculating all small pigs, they clean out the farrowing pens before a new sow is brought in to farrow. Pens are scrubbed out, and disinfected.

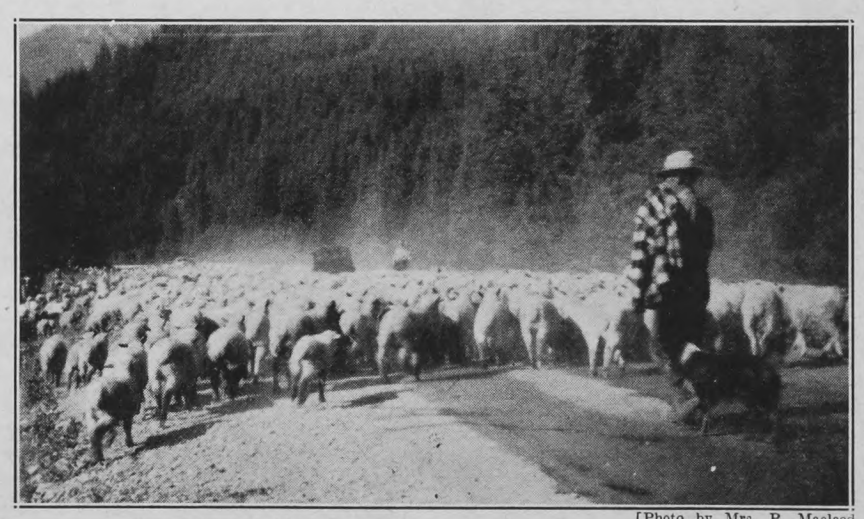
Morris has been producing longer than Arborg, but like Arborg, they are finding that they could sell many more pigs than they can raise. All pigs are sold locally. They turned down an order from Minnesota for 3,000 weanling pigs, and refused a contract from a feeder in Illinois who wanted 2,500 small pigs a month. Other smaller orders and inquiries have received the same answer, that no pigs would be available. "American feeders are anxious to buy our type of hog," said Fred Hamilton.

The hatchery idea holds out some promise. "After all, it is possible to utilize unused stables for hatchery purposes, and so building costs can be kept low," said Hamilton. "I see no reason why there should not be enough hatcheries so no feeder had to drive over 30 or 40 miles for his pigs. Customers are not restricted to the regular breeders and feeders, either; at least 50 per cent of the buyers from the Morris hatchery have been men who have raised few, if any, hogs for the last few years. Do away with the trouble of raising the small pigs, and you seem to get more farmers interested in raising hogs."

There is another attractive feature about the co-operative pig hatcheries; members own the pig breeding facilities, and it is thought that their loyalty to their own co-op might serve to keep them in the pig business. Hog population in Canada has declined steadily since 1944, in spite of good prices. The general use of hatcheries might reduce the large fluctuations in hog marketings, and simplify the problem of providing a steady and reliable supply for overseas markets.

Hatcheries could serve to improve hog quality. The specialized breeder can afford to buy good boars, and select sows carefully.

The Morris and Arborg experimenters are satisfied the hatchery idea lends itself to co-operative treatment. The day could conceivably come when the pig hatchery, either as a co-operative or individual effort, is as generally accepted as is the poultry hatchery.



[Photo by Mrs. P. Macleod.

***A band of 2,000 sheep in the Cascade country of B.C.***

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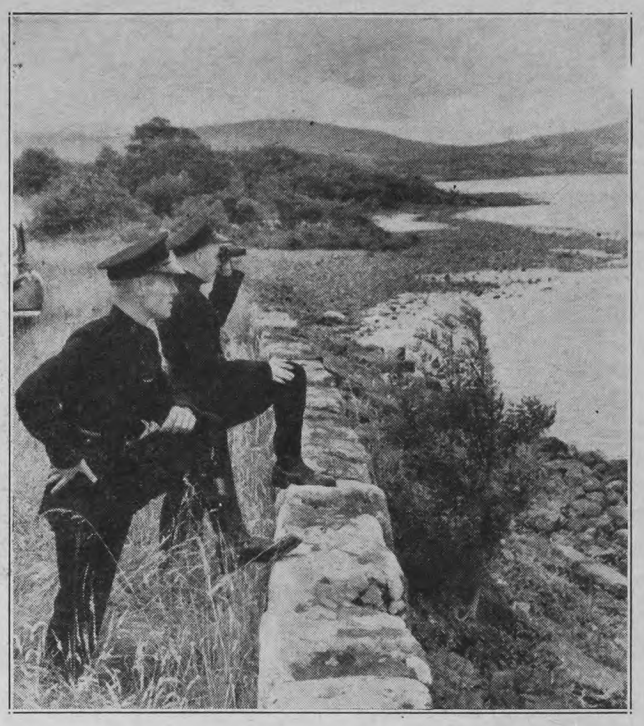
# Frontier to Fortune

***Trade relations between Eire and the United Kingdom make a smugglers' paradise of the boundary that marks off the six counties***

*by* **W. J. ROSS**



***Two officers of the Royal Ulster Constabulary watching suspicious movements of cattle near the boundary.***

WITH the establishment of the Northern Ireland-Eire frontier a quarter of a century ago, there opened the first exciting chapter in a story so tightly packed with drama, action and thrills that even Hollywood would experience difficulty in finding descriptive adjectives to do it justice.

Chapters are still being added to the story. It is a story of pitched battles with vigilant police, of daredevil exploits on mountain sides and in desolate bogs, of plots and informers, and of thrilling chases in high-powered cars along twisting country lanes and through sleepy villages. Nothing in fiction can compare with this story of the devil-may-care Irish adventurers who are said to be making huge fortunes by smuggling contraband across the frontier in defiance of police and customs officials.

Two hundred miles in length, the Irish border runs through some of the wildest and most isolated districts of the country. In some areas it is marked by a wide river and in others by rugged mountains. It is over these barren peaks and across these treacherous rivers that most of the illegal traffic passes, for the experienced smuggler has discovered that the more difficult the route taken by him the more likely it is that he will escape detection.

Recently, a horse-drawn hearse, in which rested a coffin covered with beautiful wreaths, approached a customs post on the Irish frontier near the town of Monaghan (Eire). The official in charge of the station respectfully removed his cap as the vehicle came to a halt. From the driver he learned that the destination of the hearse was a town just across the border in Northern Ireland. After a cursory inspection of the vehicle the customs officer bade the driver proceed. And then he changed his mind.

"Wait a moment," he ordered. "I think I'll ignore precedent and have a look inside that coffin." The driver dismounted and helped the official to remove the coffin. All the while he kept muttering solemn warnings of what was likely to happen to those who tamper with the dead.

The customs officer ignored the warnings. Removing the coffin lid he got the surprise of his life. Inside lay a heap of watches, rings, bracelets and other articles of jewellery. Had he received it, the London jeweller, to whom the consignment of contraband was being sent, would have made a small fortune by selling the articles at treble the price paid for them by his agents in Dublin.

Jewellery is the most popular item of contraband smuggled from the Irish Republic to England via Northern Ireland. A gold watch purchased in Dublin for £8 will fetch up to £30 in London. On other items of jewellery similar huge profits can be made.

Not long ago, an experienced smuggler confessed that during the war years he had made a large fortune by smuggling rings across the Irish frontier. The method he employed was an ingenious one. Every morning he sent a case of fresh fish by rail from a port in Eire to a town in Northern Ireland. In the gullet of each fish a ring was placed. Customs officials gave the case only a passing glance.

When the fish arrived later in Northern Ireland a partner there removed the rings and disposed of them through pre-arranged channels. The pair might still be adding to their fortune had a ring not dropped through a crack in the box just as a customs official was handling it.

THE wholesale smuggling of jewellery has become such a serious problem that in the express trains running between Dublin and Belfast a small army of customs officials is employed to search the baggage of passengers. Until recently a favorite ruse employed by jewellery smugglers on this route was to visit the dining-car before the search began, order stout, and into the glass drop the rings and other small articles of jewellery purchased in the Irish Republic. Drinking casually when the searchers passed through, many smugglers in this way made considerable fortunes. But the ruse is no longer of value.

Some weeks ago the customs officers pounced on the stoutdrinkers, relieved them of their refreshments, and made a huge haul of contraband.

Day and night the Irish border is patrolled by members of the Royal Ulster Constabulary and the Civic Guards of the Republic. But there are so many roads and narrow lanes leading from Eire to Northern Ireland that the patrols find it impossible to control the smuggling of contraband. For every smuggler caught by the police

at least a score go undetected. Immediately an item of food becomes scarce in Eire, racketeers buy up large quantities of it in Northern Ireland. These supplies are taken to the border districts and stored there for a short time. Later they are removed in small quantities to the retailers in Eire.

Occasionally the smuggler is caught with the goods. In such cases a heavy fine is imposed. Imprisonment for smuggling offences is rare. Capture by the police, however, seldom makes the smuggler turn over a new leaf. Subsequent successes will reimburse him. Soon he is back again on the job.

Recently I attended a petty sessions court in a small border town in Northern Ireland. Here the prosecuting solicitor informed the magistrate that in a certain county smugglers can actually insure themselves against capture by the police! So far the enterprising broker has not been discovered.

Even dogs have been trained to smuggle. A short time ago customs officials operating in the Strabane district of County Tyrone saw a terrier heading for the Republic of Ireland side of the border. Attached to its collar was a white loaf. When approached the dog made a dash for safety and crossed the border well ahead of its pursuers.

On a grand scale is the smuggling of cattle which command in Northern Ireland prices considerably in excess of those ruling in Eire. It is around cattle smuggling that some of the most exciting stories have been written. Before the animals are driven across the border the smugglers rub saltpetre on the noses of each. This, they claim, prevents the cattle lowing and so making their presence known to police patrols. In some cases specially made rubber "boots" are placed over the hooves of the cattle in order to ensure that their passage across the border will be as silent as possible.

Dogs have been trained to drive cattle across rivers which mark the frontier and to return when their task has been completed. Recently, in the Keady district of County Armagh, cattle smugglers and police fought a pitched battle with sticks and stones. The battle ended in a victory for the police who seized the cattle and drove them off while the defeated smugglers made good their escape.

Although more intensive efforts have been made in recent months to curb the activities of smugglers on the Irish frontier, the authorities realize that they can never hope to end the racket. The spoils of success are much too attractive to adventurous individuals who delight in pitting their wits against those of the police.

*Canadian cheese a-curing.*

## *The Parson's Church*

*Continued from page* 14

lame wing, and my control's all shot. How's about you spelling me off for an inning or two, huh?"

"Oh, no!" protested Tanner, shocked at the very idea.

"Aw, come on," coaxed Dooley Harper, falling in with Cap's plan at once.

"No, I just couldn't," the minister shook his head.

"Sure you could, Pop," Morton pleaded. "Cap Riley's been givin' them Vicksburg bums home runs for free, with that sore arm of his. Honest Pop—you just couldn't be any worser'n him!"

THE cleric suddenly laughed, looking down at the earnest young face of his son who meant his sour words to sound sweet. And Dooley Harper was Tanner's good friend—so was Cap Riley. He knew every player on the team, and was well aware of their many defeats by the Vicksburg boys. Reverend Tanner remembered offers from big league scouts made him while in college, mentioning money that sounded fantastic as they tried to coax him to give up ministry plans for a professional ball player's career. He'd kept that part of the past carefully under wraps since being ordained, but the old spirit of the game returned to tempt him at times. And with a sigh for his own vanity, the minister knew that he could still do a great deal better on the pitching mound than Cap Riley at his best, despite his 32 years. So he permitted himself to yield to their coaxing, handing black hat and jacket into Morton's willing care.

"Now, then," the minister said to Dooley as he rolled up his shirt sleeves. "What signals are you using?"

The crowd was amazed at the strange substitution when the clergyman walked self-consciously out to the mound. The Willowdale people who knew the parson applauded politely, but with some diffidence. A buzzing of whispers went around the bleachers: whatever had got into Cap Riley, sending a preacher to do a pitcher's job? Even the Willowdale team, most of them unaware of the demonstration of the minister's skill witnessed by Dooley and Cap Riley, looked embarrassed as they trotted to their playing positions to support the new substitute.

But the Vicksburg boys talked it up, fast and rough:

"Come to give us a sermon, Reverend?"

"How about a hymn to start with, Parson?"

"Get out the hat, boys—we'll take up a collection for the new pitcher!"

The clergyman began to wish he had not accepted this dubious honor. The catcalls became even more ribald, while the Willowdale team and crowd stayed ominously silent. Only Cap Riley and Dooley Harper tried to talk down the Vicksburg jeering aided by a shrill juvenile rooter called Morton. But the jeering drowned out this feeble support, and the minister was the unhappy target. Tanner licked his dry lips and felt clammy sweat on his palms, realizing that he was experiencing the worst case of stage-fright he'd ever known.

"Stick to preachin'!"

"G'wan back to your old pulpit!"

"Better start prayin', Reverend—we're gonna slaughter you!"

Chief of Police Tom David was referee, and held up the game to give the new pitcher a chance for a few practice throws. Everyone hushed, even the rival players, watching intently as the cleric lopped the ball to Dooley Harper behind the plate. There was no speed nor break of curve on any of those three balls, so the catcalling grew louder after each throw.

"Play ball!" ordered the Chief.

Jeff Coombs, the raw-boned giant of the Vicksburg nine, strode confidently to the plate and grinned mockingly at the nervous cleric.

"Just put one over the collection plate, preacher, and see what I donate."

Tanner watched while Dooley Harper signalled for the fast throw. He was tempted to shake his head in refusal, wondering if he could deliver that pitch anywhere near the catcher's mitt. Fingering the ball, the minister felt a termor in his hand and fervently wished he could go quietly and quickly away from the game. And at that unhappy moment, a far-carrying feminine voice cried out:

"Do it for the church, Parson!"

He knew that voice. It belonged to the Widow Meegan, and Tanner realized that she was thoroughly enjoying his discomfiture. As he remembered his recent fight for church funds, anger mounted again in the clergyman. To complete the cure for nerve jitters, he heard a young voice shrill out:

"Get 'im for me, Pop!"

The minister shuffled his two queer hops, straightening his arm like a whiplash. The smoking ball smacked Dooley's mitt before Jeff Coombs could stop smiling.

"Ssssssstrike!" yelled the Chief.

THERE was a sudden, tense silence among crowd and players. Dooley hollered "Atta-boy!" as he returned the ball. Without pausing a second, the minister hopped again and flashed his arm straight. Jeff Coombs swung, but his bat came into hitting position after the ball was stinging in Dooley's mitt.

"Ssssssstrike Two!"

The Willowdale team came awake with a roaring cheer. The Vicksburg boys, startled, howled vindictively and intensified their anti-cleric campaign. Jeff Coombs set himself for fast action. Reverend Tanner made his ridiculous twin hops and his arm straightened. Jeff struck like a windmill whirling in a hurricane wind. But the ball drifted slowly homewards. Jeff's vicious swing was all over as the big round baseball floated leisurely past his frustrated face.

"Three and Out!" yelled Chief David, trying hard to keep the home-town triumph from sounding in his voice.

"Sonavagun!" muttered Pete Popovitch the plumber, playing first base. "Whaddayuh know about that, huh?"

The crowd came stamping to its feet, thundering out a long cheer. Tanner was grateful for their swift acceptance of him, savouring again the old magic of the beloved game. He snapped the ball over to Pete, who smoked it on to shortstop, then flashed across to third base before lopping back into the minister's glove.

"We're with yuh, Parson!" yelled Dave Brown.

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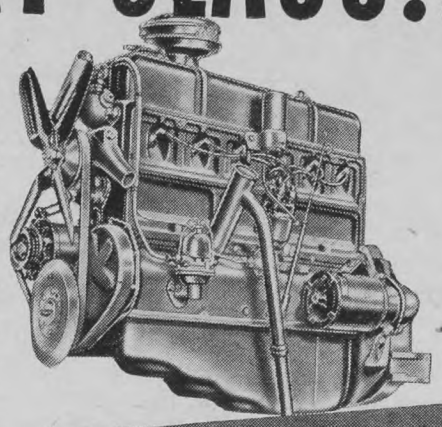

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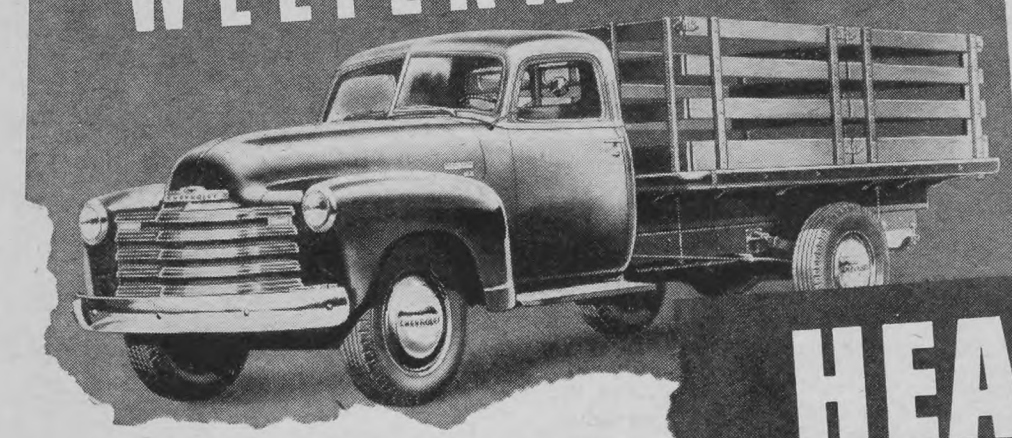

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"Sock 'er in there, Mister!" howled Jimmy Todd.

It was the Vicksburg batter who was nervous this time. He swung fast for a slow ball, reached for a curve that eluded him, then became wary and rested his bat while the Reverend threw an easy one right down the middle.

"Two down!" shouted Chief David. Dooley Harper executed a jig step, all the way out to the pitcher's mound.

"Boyoboy!" drooled Dooley. "You got 'em rattled now, Reverend. Listen, this next batter is a lunk-head. He can't hit nothin', so just do what seems easiest and we'll sew up this inning."

The lunk-head let two pitches be counted against him. Then he closed his eyes and swung, connecting on top of the Reverend's fast ball. The pill bounced across the field at high speed, dodging shortstop and letting the lunk-head romp to second base before outfielder Cressman got his glove on the ball and slung it in.

"Yah! Yah!" howled the Vicksburg team. "Now we got your number! Better go back to preachin', Reverend."

The Willowdale team rallied strong and loud, defending their new champion.

"That's just an accident!" came their swift support. "That's just a lucky fluke. We're with you, Parson—Never mind that one. Fan the next!"

The Vicksburg batter advanced to the plate, sassing the minister. Tanner took the ball, fingered it carefully, stepped back for his double hop, then whirled and threw the ball to second base just in time to catch the lunk-head leading off to try a steal to third.

"Out!" roared Chief David.

Willowdale's nine swarmed around the minister, slapping his back boisterously.

"A pitchin' parson," marvelled Pete Popovitch. "Sonavagun! Now I seen everything!"

VICKSBURG began talking loud as the Willowdale batters lined up for their parade to the plate. Dooley Harper was first man up, the weakest hitter on the home team. But Dooley was feeling good right then, all keyed up about catching the minister's speed-ball. So Dooley leaned his weight into the first ball that came near and socked it out to mid-field for a two-base hit. Then Dave Brown cracked one fair and square and the ball soared out beyond the last fielder. Dooley and Dave romped home to bring the score up to five against the Vicksburg count of seven.

"We're on our way!" yelled Willowdale. "Watch us win this ball game!"

"Yah?"

"Yeah!"

But the next three Willowdale batters struck out, then it was the minister's turn to walk to the mound a second time. The first man against him ticked a curve for a foul fly, which Dooley was happy to snaffle. Tanner pitched the second batter to a three-strike out. But the third batter was something else again: he swung hard and connected clean with a fast ball, sending it straight to outfielder Cressman's glove, who fumbled. The Vicksburg man tore around the diamond at top speed to make it a home run and raise the visitor's lead eight to five.

"That's okay!" shouted the Willowdale team. "That's just an accident!"

"Play ball!" ordered the policeman referee, and Tanner smoked it down the line into Dooley's mitt.

"Sssssstrike One!"

It was one-two-three with this batter, who never came near any of the minister's offerings. Then it was Willowdale's chance at scoring, the last half of the ninth inning.

"Hold 'em, gang!" roared Vicksburg.

THE first man clouted the ball smack into the second baseman's glove and went dejectedly back to the bench. Jimmy Todd laid out a slow grounder and beat the throw to first, then Pete Popovitch brought him home on a smashing three-bagger. But Pete was tagged out on the final slide, so the crowd groaned and studied the score gloomily, eight to six for Vicksburg, with two down for Willowdale.

"It's still a ball game," whooped Cap Riley as Cressman banged the leather for a one-bagger. He stole second on a catcher's fumble, then Husky Bill Munn lunged into a low ball and raced to first base.

"You're up next, Parson," ordered Cap, grinning as he smote Tanner on the back.

"Oh, no!" protested the minister. "The game's at stake now."

"Yep. It's your turn. How are you at batting?"

"Absolutely rotten," said the minister, with rueful honesty.

Cap Riley laughed and said: "Don't worry about it. Just try. Win or lose, Mister, we're all for you!"

Reverend Tanner felt a lump rise in his throat as he walked toward the plate. He'd become very fond of Willowdale during his period of service in the town, and he felt exceedingly proud of its good people at that queer moment of game tension. Remembering his low batting average at college, he half-moaned as he grasped the bat.

"Oh, my!" murmured the minister, swallowing the lump and oggling the pitcher.

"Sock it over the fence, Pop!" yelled Morton.

The first pitch was a teaser, but the minister made a mock pass at it to enable Bill Munn to sprint to second base. Cressman was now hunched on third, all ready to pound down the home stretch. While Tanner was checking these matters, the Vicksburg pitcher slapped in a fast throw and the Chief of Police reluctantly but impartially called it a strike:

"Strike Two!"

"Dear me!" muttered the distressed cleric.

He got himself set, while the Vicksburg catcher lopped the ball over to second base in the vain hope of catching Bill Munn with a foot off the bag. Then the pitcher had the ball again, glaring down at the nervous batter.

"Win it for the new church, Parson!"

That was the Widow Meegan's shout. For the New Church? The minister wondered if she meant she'd donate for the church fund if—? Surely a prayer was not a-miss as the ball

loomed toward him! It looked sweet and steady. He whirled the bat, putting all his strength into the swing. There was a beautiful sound of hard wood striking the leather sphere. Prentice G. Tanner caught a glimpse of the soaring ball as he ran like a schoolboy to first base, scampered on to second base and third, and almost stepped on Bill Munn's heels as they charged over home plate to the delirious screamings of the Willowdale fans. Score: Willowdale nine, Vicksburg eight.

He clambered up into the bleachers, fighting his way past scores of hands that sought to shake his and pound his back to applaud his home run. Tanner scrambled to the top seat of the stand, where Mrs. Meegan was still whooping with pleasure.

"Listen—" panted the minister. "I heard you— (puff!) You said (puff!) You said, win it for—New Church. Will you—(puff!) Will you—make a—donation now?"

"I certainly will, cried the lady. "I've waited a long time to see the Vicksburg team get its ears pinned back—"

"You gotta join the team, Parson!" shouted the Willowdale players, climbing the bleachers in pursuit of the puffing minister.

"Sonavagun!" yelled Pete Popovitch. "Be our pitchin' parson!"

"Oh, no," protested Tanner. "I—(puff!)—couldn't!"

"Sure you could, Pop!" urged Morton, popping up between Dooley Harper's legs. "Golly, Pop—I didn't know you were a killer-diller at the plate!"

"Aw, please!" implored Cap Riley. "If we can beat Vicksburg, we got a chance to win the league pennant."

"LOOK here, Mr. Tanner," cried the Widow Meegan, turning on her broadest smile. "I'll bargain with you. You play ball for Willowdale, and I'll donate half the money for lumber and materials for the new church!"

"New church?" echoed Dooley. "Say, I heard about that! Listen, Parson—the pennant's worth $500. Win it for Willowdale, and the team'll give it to the church fund."

"We'll do better'n that," seconded Cap. "Win, lose, or draw, every man-jack on the team'll help you with a building bee if you join our nine."

"Sonavagun!" cried Pete. "I'll sell plumbin' stuff at cost and install it free—but you gotta join the team!"

"Come on!" urged the Widow. "Do it for the new church!"

"Now, just a minute—" protested Tanner.

But Cap Riley, Dooley, Bill Munn, Cressman, and the other baseballers seized the minister and hoisted him onto their shoulders.

"We're building a new church!" they chanted. "The Pitching Parson's joined the team!"

Willowdale fans yelled loud approval, crowding around to shake hands with the minister and promise help and donations.

"Atta-ole-kidderoo, Pop!" shrilled Morton, clambering on his father's back.

That's how Willowdale's team started the winning streak which copped them the league pennant. And that's why Willowdale staged the gigantic building bee at the end of the baseball season, erecting a brand new church for the pitching parson to preach in.

# "Mahnomen"

*Continued from page* 13

with a second stick held in the other hand gently taps off the heads inboard. Back and forth over the lake the canoes glide, making each new swath as close as possible to the last. Then the laden canoes, riding low in the water, are slowly poled to the shore.

Now the rice must be parched to loosen the hulls. Old squaws stretch skins on poles about three feet above the ground and pour the rice on top of the skins. A slow fire is kept burning under the skin for two or three days. When Herb Williams first began to harvest wild rice he substituted long metal troughs to hold the rice and had squaws stand at each end of the trough and stir the rice with long-handled hoes to keep it from burning.

After the parching, comes the "dancing of the rice." An Indian man holding to a bucking beam tramples the rice in a hole in the ground, all the time chanting a song in time to the tramplings of his moccasined feet. Here again Williams quickly made a change in the old Indian method—he substituted concrete "dancing pots" as the Indian method "made the pudding too black" he said.

Last of all, young Indian girls scoop up the rice in their birch bark winnowing trays and climbing to the highest point of rock to gain the benefit of every breeze, they toss the rice in the air to free it from the chaff. That night the Indians feast on "mahnomen" and dance in the full moon in honor of the first day of the harvest.

Williams decided that if he were going to harvest wild rice on a commercial scale he must (a) have some measure of control over the water level of the lake to prevent his crop from being drowned and (b) evolve a cleaner and more expert method of parching, threshing and grading wild rice. At the northeast end of the lake, Williams built a control dam with removal stop logs. In spring he pulls out these logs to let the high water pass off, then replaces them to hold the water of the lake at a suitable level.

The rice fields are covered first by the Indians in canoes but when the Indian suddenly feels rich with $200 or $300 in his pocket, true to his nature he wanders off before the harvest is complete. Then Williams' harvester goes into action.

This submarine harvester, a sort of surrealist binder, is rather unwieldly and gaunt in appearance but it does the job efficiently. It is mounted on a 32-foot scow, on either side of which are revolving beater arms which gently tap the rice heads knocking the kernels onto the tin tables below. The kernels are carried by rakers onto the boat where a helper shovels them into jute bags. The scow is propelled and steered by two large paddle wheels operating independently and powered by an 85-horsepower engine. These paddle wheels, by stirring the mucky bottom, cultivate the rice beds in the same way that a plow prepares the grain fields. By this method Williams has improved his stands of rice and ensured next year's crop. Conservationists, who had denounced wholesale harvesting of wild rice, were now convinced that though Williams' harvester took off about 85 to 90 per cent of the crop, compared with 45 to 50 per cent by the Indian method, yet stands of rice were greatly improved by this underwater method of cultivation.

*The finish of the wild rice harvesting race as canoes race for the goal.*

WILLIAMS does not parch the wild rice as soon as it is picked, instead he lets the green rice lie from three to six days, turning it every 24 hours for the first two days, then every 48 hours after to avoid heating or mold. He believes that handling the rice in this way produces a better grade of rice, and with 30 years of experience he should know.

Parching the rice is now done by a system of engine driven drums, rotating over a low fire. Hulling by modern machinery replaces the old Indian method of "dancing the rice" in a hole in the ground. Williams has contrived cylinders about 24 inches in diameter equipped with rotating cores of flexible rubber spokes that remove the hulls by friction. Suction apparatus takes away the hulls. To further improve the quality, the rice is passed over screens which take away any broken rice and chaff, then hand picked to remove any "ergot," a fungus growth sometimes found in wild rice.

Managing and directing 50 redskins off in the bush country could well be a ticklish proposition, especially since there is no telephone communication at Williams' camp and its only connection with the highway is a four-mile swampy road, almost impassable. But Herb Williams and his wife Elsie use simple, effective psychology in handling their Indian workers. The wild rice harvesting contest, which Williams introduced, stimulates the Indians' competitive spirit and gives a holiday flavor to the venture as well as bringing in a goodly supply of rice. The Indians receive the usual rate of ten cents per pound for the green rice and the winning team gets a $10.00 prize.

Then, too, the Indians are given the first chance to pick in the rice fields before the mechanical harvester is used since there has been some feeling that a machine should not be used to gather their traditional crop.

In this isolated camp there is the fear that accident, sickness or death may occur during the wild rice season. Elsie has had to cope with double pneumonia, severe cuts and any number of minor illnesses in such a way as to relieve any distrust which the Indians might have of a white woman. Gradually she has built up a confidence with the Indian families, from old Tom who came to meet her in the evening when she returned from town because "you're a white woman and might be afraid" to the little children who have known her kindly ministrations in illness.

ONCE when Elsie heard that an Indian girl was ill in one of the tents, she went to investigate. She found a little child who had been badly burned two days before at the fire. When she tried to put ointment on the burn the child, with the inherited distrust of whites, screamed blue murder until the Indian mother complained, "You are hurting my child."

What to do? The child needed attention at once. Gently Elsie laid her hand on the child's body where it was not burned. Again the child sent up a blood-curdling yell, "See," said Elsie to the Indian mother, "I'm not hurting your child," and the mother was satisfied. One day Elsie was baking cookies and looked up to see an Indian at the open door. He asked to buy some cookies. "But the cookies I bake are not for sale," she explained.

"I'll give you dollar dozen for cookies," returned the Indian.

"The cookies aren't worth a dollar."

"I give any price, the little girl—she want," persisted the Indian, true to his race in satisfying immediate desires.

"Give these cookies to your little girl," and Elsie handed out some cookies hoping she had not set a precedent for all the Indian children of the camp to come begging. The wild rice season was over and the Indians had returned to their reserves but during that winter a small untidy package arrived at Williams' camp. Inside was a miniature pair of beaded moccasins and a labored pencil note, "I love you Mrs. Williams." Elsie proudly wears this little gift from the Indian child as a brooch.

The Indians have a beautiful family life, the Williams relate. They are overindulgent to their children and kind to their old people. They arrive at the camp in families of 16 and 20 made up of grandparents, uncles, cousins, aunts and numerous children, and there is no bickering or quarreling among adults or children. One aged Indian woman is transported from place to place at the camp by wheelbarrow which her son solicitously pushes. Williams, who is six feet tall and powerfully built, has had little trouble with drinking among the Indians though he did hasten to pay a fine for an Indian worker who, under the influence of liquor, struck a "Mountie." Williams figured it out this way: if this Indian missed his chance to pick rice during the season, his large family would be destitute.

WILD rice was first used as a food with the abundant wild game of our country and is delicious as a stuffing for wild duck, or made into desserts such as "Wild Rice Delight": ½ cup wild rice, ½ cup brown sugar, ½ cup chopped nuts. Wash wild rice and soak overnight. Boil in salted water until well done. Cool. Mix all ingredients, serve with whipped cream. Gourmets use wild rice to stuff peppers or to combine with tuna fish or in chow mein or baked in alternate layers with oysters. A Winnipeg sportsman's club served wild rice with elk meat at their annual dinner this year.

Herb Williams has resisted attempts to corner the wild rice market and remains an independent "farmer." About 90 per cent of his crop is sold on the Chicago market. The present retail price Williams considers exorbitant and he believes that wild rice can and should sell at a price to attract Canadian housewives. Williams continually strives to keep his rice the finest on the market and to this end he seeks information.

Wild rice can be an important item in Canadian economy and a continuing source of revenue for Indian and white man, he asserts. There are large stretches of unused wild rice which properly managed would supply the Indian with food and work.

[Photo by Helen Urchit.

*October brings its usual quota of shooting accidents, but this young Nimrod won't be mixed up in one.*

## *Man-of-Good-Heart*

*Continued from page* 15

Like all true philanthropists his clothing was on the shabby side and during a speaking tour in Europe to raise funds for his Western missions for the half-breeds and Indians, he was presented with a fine winter coat. Graciously Lacombe accepted the gift, then in another city disposed of it and added the sum it brought to his collection of money for his Metis.

HE was a great raconteur, and maintained a constant correspondence with the Smithsonian Institute in Washington that has formed the basis of many studies on early Indian life in the Midwest. In addition to all his other activities he found time to compose a dictionary and a grammar in the Cree language, both of which he dedicated to Archbishop Tache. He also brought four Sisters from Montreal to found the well-known St. Mary's Academy in Winnipeg.

Father Lacombe's inventive mind was always at work or perhaps it could be said of him, necessity truly was the mother of invention, as the natives discovered watching him fashion the first shingles seen in the West, or the time at an Indian camp when he found they had difficulty understanding his stories of the Bible. He took a parchment—buffalo-hide scraped free of hair—a piece of charcoal from the fire and drew pictures that the Indians understood and enjoyed. The popularity of these ingenious religious "ladders" spread to all parts of the world to assist missionaries in their teachings, and many samples may be seen at St. Albert mission today.

His service to the Indians never ceased—even when the great epidemic of smallpox struck the plains, carrying away thousands, he toiled daily to nurse the ailing and bury the dead, his only precautionary measure a quill of camphor held in his mouth. He was most deserving of the title they gave him—Man-of-good-heart.

"My good friend Pat Burns," he would say when telling about the 300 acres presented by the wealthy cattleman toward Lacombe's work in establishing the Metis in Alberta. Burns made a generous offer to build the priest a fine residence anywhere he wished. Lacombe chose Pincher Creek for the site of his Hermitage.

Quite apart from his work among the Indians, Father Lacombe labored constantly for the advancement of civilization, and during the building of the Canadian Pacific Railway in western Canada officials called upon him many times to placate the Indians when they threatened violence to the men laying the steel. When he learned of plans by 1,500 Indians to massacre the construction crews he tried to warn the whitemen but they believed themselves capable of handling the matter. The priest knew better and wired headquarters asking for permission to take care of things in his own way since it was now too late for armed aid from the East. When this was granted he purchased 200 pounds each of sugar, tea and tobacco and distributed it among the Indians and after a long parley won from them a guarantee of safety for the railway workers.

Wm. Van Horne, president of the Canadian Pacific Railway, said that Lacombe's vivid account of the country between Edmonton and Calgary was so clear that no exploratory work for the engineers was needed.

At the request of the same railway he served for a time as chaplain to the construction crews about Rat Portage —now Kenora, Ontario. But he found the blasphemous, hard-drinking crews a far cry from his simple prairie Indians and prayed in his diary—"My God, send me back to my old Indian missions. I am longing for that." And when he was released the rough workmen presented Lacombe with a fine team of horses and a buckboard for his prairie travels.

All through the harrowing time of the 1884 Riel Rebellion the settlers in Alberta owed their comparative safety to the men of the church—chiefly Father Lacombe and the Protestant missionary Reverend George McDougall—day and night these men worked in their particular fields to prevent bloodshed and clarify the situation. In recognition of his role as peacemaker Queen Victoria sent Father Lacombe a personal message and her photograph. And it was long recalled how he accompanied a powerful Chief to a military camp and being asked the password by the sentry gave his own name which gained him instant entry.

Father Lacombe died in Calgary at the age of 90 in December, 1916, and his body was carried to St. Albert to rest in the little cemetery that overlooks the valley and the little bridge, and the oil derricks that were not there in his brave time.

"Revenez—come back again" reads the message on the log archway through which all must pass to reach this little mission, and the sightseers return again and again to learn, from those who still remember Father Lacombe, thrilling accounts of the great Man-of-good-heart.

# *Blueberry Island*

*Continued from page* 11

He was its musketry officer at the time J. L. Ralston was its adjutant, and Angus Macdonald, now premier of Nova Scotia, a fellow lieutenant. He taught in private schools on the prairies in the inter-war years, and did not go to the coast till 1937 at an age when most men are beginning to take it easier.

Suckling soon perceived that Ed Johnston had a good thing. The only way to learn the business from the ground up was to get it from them. So for the first two seasons he worked for them for his board. In 1939 M. B. Davis, Dominion horticulturist, visited Lulu Island, and immediately sensed the future of blueberry culture in this ideal environment. What's more he discovered Suckling and encouraged him in the course which he has followed since with such unremitting zeal.

NO phase of blueberry growing or marketing seems to have escaped Suckling's penetrating study. It seems likely that every word that has been written on the subject is to be found on his bookshelf. But he is no follower. Dissatisfied with the fertilizers in common use, 4-10-10 and 8-10-5, he has launched on experimental work of his own. He believes that eventually he and his neighbors may have to go to organic fertilizers. Almost within sight of his farm is an immense factory at Steveston manufacturing a fish paste that is shipped mostly to American specialty farmers. Suckling suspects that it would be good business to keep some of this at home, and he intends to know the answer.

It is a common practice on the island to cultivate between the blueberry rows with a rototiller. He will have none of it. With one hand he scoops the loose peat away from the roots to demonstrate that of all bush plants the blueberry has the finest and shallowest roots. In his opinion even the shallowest cultivation does too much damage to them. It is sufficient to keep down the grass and weeds with a mower until the arching bushes subdue them with their own shade.

Marketing is a playground for Mr. Suckling's ingenuity. He has devised his own private pack—pint berry boxes through whose perforated cellophane tops, held in place by an easily placed and easily adjusted elastic band, the buyer can see the wares he might purchase. He has developed private outlets in prairie towns. He has sent unnumbered crates to interested parties clear across Canada, not forgetting the members on Parliament Hill. It has allowed him to test the shipping qualities of many varieties.

Here is the testimony of M. B. Davis on shipments to Ottawa: "For a number of years Mr. Suckling sent trial shipments down to me, and they always arrived here in first-class condition and kept for a week or more after arrival under ordinary storage conditions. All the various consumers on whom I have tried them have been delighted with the product, and of course the size and appearance always attract attention. I can't see why the prairies, and even the eastern market would not be very glad to get these as a fresh product. I would expect that with a little push this industry could become fully as important to British Columbia as either the raspberry or strawberry is at the present moment."

Among Mr. Suckling's most treasured mementoes is a letter of appreciation from the comptroller of the King's household for a crate shipped to Buckingham Palace.

THE propagation of blueberries from hard wood cuttings is a little tricky, but Mr. Suckling has mastered that too. The federal government bulletin on blueberry culture uses as one of its illustrations a battery of cold frames on University Farm, as Mr. Suckling calls his place, in which 22,000 cuttings of approved varieties are being rooted. The day of $3.00 bushes is over. Tom, Dick and Harry now take away loads of them from this farm at 50 cents for two-year-old bushes and 25 cents for year-old cuttings, the former preferred.

Speaking of marketing, highbush blueberries now sell for the highest price of any fresh fruit on the Vancouver market. For the last five years growers have been getting 29 cents a pint box, out of which four cents goes for the box. The farm price for crates of 24 boxes has been $5.50 per crate, but it is anticipated that this year's crop will sell for around $6.00. The profits of $300 to $400 per acre reported become more credible when one reflects that these prices are paid for a product which yields at the rate of one to three tons per acre.

Picking presents no problem on the outskirts of a populous city. Ed Johnston, who has had as many as 120 of them at one time, declares that he turns away scads of them.

More serious are the changes of weather that occur in the long harvesting season which begins in the last week of July and extends to frost, which may be as late as October 5. Berries picked in rainy or dewy weather do not keep as well as those picked in dry weather. An extended spell of warm weather hastens ripening and may bring a crop in faster than the present retail outlets for fresh fruit can absorb it. At such times the surplus goes to canning or freezing plants, of which there are now several. Berries sold to these alternative outlets, of course, command a lower price.

The canned berries sell for a good price in comparison with other canned fruits. Mr. Suckling, who has been doing his own canning for three years sold his processed berries last year to retailers who got 47 cents per 20-ounce tin, fancy grade; a tin of this size containing one pint of berries. The railway strike of last year threw a terrific scare into the berry growers. They realized for the first time how necessary it was to develop the canning and freezing outlets for their product, even though the prices paid for fruit so destined looked low in comparison with the fresh fruit market.

The winter of 1949-50 was a stunning experience for British Columbia, and by far the worst setback the blueberry growers have ever had. Lulu Island, which never suffered zero weather in the first quarter of this century, saw the thermometer go down to ten below in this fatal winter. The mortality in blueberry plants, especially in varieties like the popular Jersey, was high, not entirely from direct frost damage, but in disease losses in bushes weakened by frost. The whole question of disease resistance in blueberries is enveloped in scientific uncertainty. The provincial university, with the help of federal and provincial funds, is now delving into it.

LIKE farmers elsewhere, the blueberry growers are complaining bitterly about the high price of supplies. Boxes are going up in price faster than the berries that go into them. Fertilizer prices are out of this world. Ed Johnston is paying $66 per ton for stuff which he applies at the rate of ten tons on 40 acres. That is $7.00 a ton higher than last year.

*Ed Johnston photographed in front of his home. The photographer is Melvena McMorrin, daughter of one of his partners.*

Nevertheless the blueberry growers are confident of the future. They do not regard wild berries as competitive. Most of the latter are picked only once in the year. Pickers use hand rakes, a sort of dustpan with a comb edge. The resulting product contains green berries, overripe ones, twigs and leaves. The cultivated berries come on the market clean for the bushes are picked once every week by hand, and the larger size of the berry allows the pickers to do a clean job.

Neither are the Lulu Island growers afraid of competition from other parts of Canada. Highbush culture has been commenced in the Maritime provinces but the results are not nearly as spectacular as in B.C. There are now 345 acres planted on Lulu Island, not all of it, of course, yet in bearing. If a grower has to wait six years for a crop he is compensated by the fact that a bush has the same life as an apple tree. Blueberry bushes are said to have lived to the age of 100 years. Because of this longevity, the acreage

in British Columbia will mount steadily as new plantations are established.

The growers assert that even if all the available acreage is planted it will not saturate the potential demand for the product. They have recently established "The Cultivated Highbush Blueberry Growers Association of B.C." Up to now it has not taken a hand in marketing but has operated as an information exchange. What its future will be it is too early to say. With, or without its aid, the growers believe that they will make the same impress on Canadian consumers that this delectable fruit has made in the United States since American growers took up the highbush blueberry in earnest.

# Greenland Today

***The largest island of the world becomes a strategic base***

*by* **JAN PRIMROSE**

DISCUSSIONS have recently taken place between the Danish and the U.S. governments as to the part to be played by Greenland in western defence. These talks have naturally focussed world interest anew upon this largest island in the world.

Western strategists have, however, been paying increasing attention to Greenland since 1941, when it developed into an important air base and one of the most important meteorological stations. By virtue of the Inter-American Pact of Rio de Janeiro, she has, since 1947, been considered a part of the security zone of both Americas. Besides this, in 1949, she was included in the greater defence net by the Atlantic Pact, of which Denmark is a participant. Before the Danish Foreign Minister would sign the Atlantic Pact at Washington in the spring of 1949, he asked for assurance that existing American bases in Greenland would be neither reinforced nor multiplied, and that in future all questions of this kind would be examined by all signatories.

The Danish government guards Greenland jealously, and as far as possible has prevented the immigration of many foreigners since the entire population practically died out from an epidemic of smallpox in the middle of the XIX century.

This giant island is larger than the combined prairie provinces, almost as large as Europe, excluding Russia. Nevertheless, it belongs to the least explored and loneliest parts of the globe. Its 21,000 inhabitants—569 Europeans and the rest Eskimos—live for the most part in the west and southwest coast, and on the numerous islands lying off the mainland. The interior, which in several places is 1,500 miles long and 869 miles wide, is an almost entirely unexplored ice desert. It is a stretch of more than 730,000 square miles, broken up by mighty mountains — sometimes 9,800 feet high—which the Eskimos call "nunataks." Polar wolves, foxes and bears are the sole inhabitants of this awesome desert of eternal ice.

We do not know what natural treasures may be hidden beneath the thick ice blanket which covers Greenland. Last year, the Danish government allotted some 850,000 Danish crowns for the examination of lead findings discovered by Lauge Koch. The discovery of radioactive ores has also been reported recently, but this has yet to be confirmed.

Despite Greenland's unfavorable climate—the summer lasts a bare three months—Europeans who have lived there dream of returning to the land which was discovered a thousand years ago by the Norwegian sailor, Gunnbjoern. So it came that the European colony, and especially the Danish quarter, has grown during the last few years. Seven 6,000-ton merchant ships carry on the traffic between the island and Denmark, and in the capital, Godthaab, there are today 26 private motor cars and 47 commercial lorries.

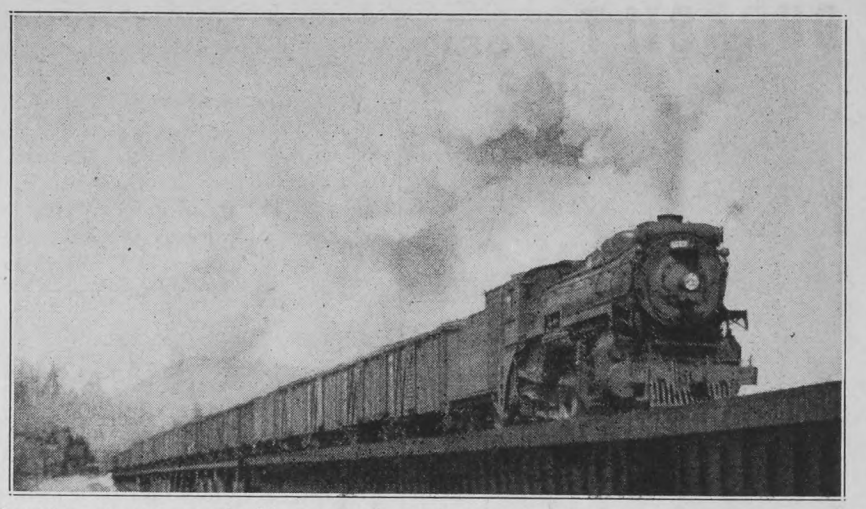
Godthaab—in the native tongue "Igdlnarsuit," meaning "the place of the largest and most beautiful eskimo huts"—is actually a harbor settlement of wooden houses gathered beneath the protective arm of the statue of Hans Edeges, the Norwegian pirate to whom it owes the foundation of its existence. He arrived there at the beginning of the XVIII century, and soon became the friend and adviser of the Eskimos, who today honor him almost as a saint. He protected them from exploitation by foreign fur merchants, and persuaded Frederick IV, ruler of the united kingdoms of the Norwegians and the Danes, to found a colony in Greenland.

Twelve male and female convicts from the Copenhagen prison were sent to Godthaab, thus Godthaab which today has no prison and no police force began its existence as a settlement of convicts. Even the oldest inhabitants are unable to recall a single case of crime in Godthaab—a town of 2,000 people.

Two factors have recently persuaded the Danish government to ease the isolationist policy of Greenland: the island's deficit in budget and Christian Veno's rich haul of fish. The financial deficit drove the Danish government to make propaganda to attract tourists. And, indeed, Greenland in summer may well become a favorite attraction to foreigners. She has fjords, snow-capped mountains, endless desert spaces, snow goose, eiderduck, salmon and cod. As a first step, Godthaab has built two inns and relaxed the conditions for obtaining entry visas.

The fish haul of Christian Veno has meant that Greenland now has its first industry. Two years ago, when the Danish fish expert, Dr. Harald Blevgad, announced that in his opinion Greenland's territorial waters held untold wealth, the Danish government gave fisherman Christian Veno from Esbjerg a licence to fish there. His boat, the "Dora Veno," soon caught so many herrings and other fish that she had first to wait for another steamer in order to unload her cargo. Since then Veno has at times caught as much as 200 tons of fish a day.

Today, canning factories and refrigerators are being prepared on the west coast of Greenland. The financial future seems assured. The isolation of the largest island in the world will soon be at an end.



*Carrying every conceivable type of goods, the freight train moves across the Canadian scene.*

# Bouquets for Boxcars

***Have you ever considered what they mean in the life of the nation?***

*by* NAN SHIPLEY

VERY few people ever consider the history of a railway boxcar until they are held up at a highway crossing and must wait for a long freight train to pass, then after irritation at the delay has mellowed a little, the motorist may wonder what the cars contain, where they are going, the meaning of the cryptic letters and numbers on their sides, and if this trip is necessary.

Some idea of a boxcar's importance to everyday living in Canada may be grasped from the fact that one of these clumsy-looking red boxes on wheels when new cost anywhere from $10,000 to $35,000, and the Canadian National Railways alone has more than $350,000,000 invested in them!

No other vehicle of transportation can boast of such a sensational past, as interesting a present, or as unpredictable a future. These great travellers carry every conceivable type of goods from buttons to bulldozers—cattle from the foothills of Alberta, rosy apples from the Okanagan Valley, furs from the Arctic, Christmas toys from the factories of Quebec, settlers' effects, fish, coal, oil and forever and ever—grain.

It has been estimated that if a single train could haul Canada's most recent crop by the time the locomotive pulled into Halifax from the West the last grain car would still be far beyond Vancouver—12 miles out into the sea!

The mysterious numerals on the boxcars are actually their birth certificates or identification cards telling a railwayman at a glance most of the information he needs to know when moving goods across country. In spite of the general public's penchant for lumping all railway equipment, except passenger coaches, into the boxcar category, there are many varieties and all are discernible by alphabetical letters and numerals.

For instance boxcars proper have letters running from "A" to "H" and even these initials denote such differences as size, length and tonnage. The letters from "J" to "U" belong to those which carry automobiles exclusively. "W" means livestock, while the remaining "XYZ" designate refrigerator cars of three different types. Flatcars, used to convey lumber and bulky machinery, are classified by double numbers "KA, KB," etc.

The working life of a boxcar is roughly 35 years, during which time it will have travelled some 40 miles per day and carried practically every known produce of import and export all across Canada and into many parts of the United States.

The exchange of railway cars between Canada and the States is continuous and often creates temporary shortages of cars in certain districts. But naturally when our exports—mine, ore, pulpwood, evergreen trees, beef and farm produce are shipped South they cannot be immediately filled and returned with fruit from Florida, cotton from Alabama, tobacco from Virginia, and all the other luxuries we enjoy from our rich neighbor.

Yet the most disgraceful thing that can happen to a boxcar is to move about empty from station to station. Empty haulage costs five cents per mile and runs into millions of dollars annually.

They have become the overnight hostel for those ragged and rugged "knights of the open road" who travel free. Tired children, dogs and cats have frequently awakened to find themselves on a quiet adventure with destination unknown. They have served as chicken houses, garages, summer cottages, and more than once as places of worship.

When the working life of a boxcar is ended many of them are demolished in the railway yards, others are pressed into service as dressing rooms for corner lot skating rinks and junior sports clubs, and equipped with lights, regulation doors and windows, and removed from their trucks—as the wheels are termed—they make adequate shelters. Other cars find their way into remote settlements and here serve as temporary homes for railway workers often where no houses exist at all.

This doubtless is the happiest fate that can befall a discarded boxcar for once a woman makes up her mind to convert it into a cosy home for herself and family the car will be completely rejuvenated. There will be windowboxes on the outside and long, green creepers to hide the faded numerals and the iron ladder where once the agile brakeman scrambled.

And it will still be close to the endless steel ribbons it has travelled over so often—still feel the hot breath of the racing locomotives—hear the warning whistles at night and listen to the song of the rails long after a train has passed.



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# A Visit to a Peat Plant

***It used to be known only as fuel but its uses are now innumerable***

*by* **MYRTLE BOWERS**

"MY ticket is to Whitemouth, but I'm getting off at Shelley," I told the conductor. He nodded agreement, and I settled down to read the paper I had brought along.

It was just over an hour's run on the C.P.R. main line from Winnipeg, east to the peat bog which I wanted to visit. I had passed the spot many times en route to western Ontario for holiday week-ends, and the piles of peat, "cubed" for drying, had aroused my curiosity and my interest. Now I had determined to make a trip for the sole purpose of finding out something about the plant, the processing of the peat, and the purpose for which the Manitoba variety is used.

The train came to a halt right beside the big building I recognized to be the "peat plant," and gathering up my camera and notebook, I stepped off the train.

I was somewhat surprised to find no streets, no sign of even a small town, not even a railway station, but I looked about and decided to venture into a small building which was recognizable as the general office. A nondescript desk stood in the middle of the floor. In front of it was a small wood heater, and behind it shelves with a small stock of work socks, gloves, tobacco, soap and chocolate bars; a filing cabinet, and a typewriter of unmistakable ancient vintage.

A man sat behind the desk, working over the sheets of figures, but he looked up as I entered, evidently somewhat surprised to have a woman invade his man's domain. However, I explained my purpose, and found Frank Thompson (as he introduced himself) more than pleased to show me around.

The ground, as we walked over it, felt wet and spongy beneath our feet, and with every step we seemed to sink into the mass of sodden peat that formed the surface of the earth in the area. It gave one the feeling of walking on mud, yet nothing adhered to our shoes, and when we entered the building we made no tracks.

The plant, I learned, is situated in what is known as "Julius Bog," and has been in operation only since 1940. The main line of the C.P.R. runs through the bog, and a spur track has been erected so that the peat may be loaded into boxcars from the processing plant. Morning passenger trains going east stop there three times a week bringing mail. Otherwise trains stop only when flagged. The spot, not shown on the railway timetable, is situated midway between Shelley and Julius, and is known as Moss Spur.

The bog runs from one-and-a-quarter to one-and-a-half miles along the track east and west, and roughly the same distance north and south, covering an area of about 900 acres.

The peat is derived from a moss plant known as "sphagnum," which grows only in a swamp or bog, where it has been immersed in water for centuries, and where there has been little or no fluctuation of the moisture content. The small green sphagnum plant grows up each season to a height of one-and-a-half to two inches. In the summer it has a tiny blossom, but it is almost hidden from view by a growth of shrubbery which reaches a height of about two feet.

As the moss ages, it decomposes, and becomes a spongy, buff-colored, water-soaked mass. In the Julius bog it can be found to a depth varying from ten to 12 feet. As soon as the frost is out of the ground (usually early in June) a cutting machine punches out blocks of peat about a foot by eight inches, and six inches deep. The blocks are cut from trenches averaging 300 yards long, three feet deep and about 60 feet apart.

Following the machine, men come along with special peat shovels and throw the blocks out into the area between the trenches, where it is left to dry. These blocks, when taken from the earth, weigh 63 pounds to the cubic foot—when dry, less than seven pounds. In ideal weather, the top surface dries in about two weeks, then it is turned and allowed to dry on the other side. After this second drying period, it is "cubed," that is, piled in cubes or coils, for further drying.

When about 80 per cent of the moisture has evaporated (about six weeks for the whole operation under ideal conditions) it is stacked in huge frames, 18 feet high, 18 feet wide, and about 900 feet long. This operation is called "harvesting," and here it is left until it is to be processed.

The processing takes place during the fall and winter. Dry peat is taken from the stacks by tractor and emptied into a shed, from where it goes by conveyor into a hammer-mill or grinder, where it is chopped into small chunks.

THE processed peat is run over a quarter-inch screen, and the smaller size is used for horticultural moss or peat. It has moisture-retaining and insulating properties which make it ideal lawn dressing. It also has an acid quality which is helpful to plants and shrubs, especially west of the Red River, where it counteracts the alkaline nature of the soil. It also lightens the heavy clay soil, where its fibrous nature supplies a long-lasting form of humus.

The small size peat is used extensively in the winter storage of bulbs, tubers and vegetables. Carrots stored in sphagnum in October may be taken out the following June as fresh as when packed.

The larger size peat is used largely by poultrymen, and will last in brooder houses and laying pens up to six months without changing. It is spread on the floor to a depth of about three inches; there is no objectionable odor, and the moisture from the droppings is absorbed by the peat, the antiseptic properties of which provide a clean, healthy atmosphere for the poultry.

After the screening process, the peat is raised by conveyors into hoppers on the second and third floor of the plant, from which it is discharged into balers, where it is compressed by machine, into bales varying in size from 18 by 20 by 38 inches (the "Super" bale), to a smaller 14 by 18 by 30-inch size (the "Handy" bale), and a chubby size, 14 by 18 by 15 inches, the latter mainly distributed in the United States markets.

While still in the baler, sides of veneer or paper are secured to the bales of peat by means of iron clamps. When it is taken from the baling machine, it is placed on a bench, and ends are put on by hand, after which the whole thing is secured by wires firmly fastened in place by machine. The peat is now ready for shipment, and is rolled on a conveyor into the waiting boxcars.

The weight of the bales varies according to moisture content as well as according to size. The poultry variety, if really dried out, runs about 80 to 100 pounds per bale, while the horticulture peat, which packs closer, will run from 100 to 120 pounds per bale, and the carloads vary from 33,000 to 36,000 pounds.

The present output of the plant averages just under 100 carloads annually, though the maximum to date was 150 cars shipped in the 1942-43 season. This was the crop harvested in 1942. Plans are afoot for increased production, which should yield between 200 and 300 carloads annually.

Chief market for the peat from this area is the central United States about 80 per cent of it going to Minnesota, North and South Dakotas, Nebraska, Kansas, Wisconsin, Iowa and Missouri. Occasionally it goes east and west of these states, and some of it is marketed in Manitoba, Saskatchewan and Alberta. The cost to the local consumer would run approximately $2.40 for a super bale, plus transportation cost from the plant. United States sales are made through importers, who resell it to their customers.

Previous to the war, and again since the cessation of hostilities, a considerable quantity of processed peat is imported from Germany to the United States and Canada. While limited local production lessens somewhat the competition from the imported product, it still causes some concern among local producers on account of lower wages in the European plants, and the cheaper ocean transportation cost. Quality of the imported variety is equal to, but no better than that from the local bogs.

One of the largest peat plants in Canada is located on Lulu Island off the coast of B.C. Another, smaller plant is in New Brunswick.

The camp at Moss Spur consists of the main plant building and adjacent sheds and work buildings, besides a number of small huts which house the workers, a cook house and the small building which serves as general office, store for incidental necessities and first aid depot.

THE bog is under a 99-year lease from the Manitoba government, and royalties on production are paid annually to the Department of Mines and Natural Resources. A quarter section of the land is school property, and this is the only portion which is assessed for property tax.

Prior to commencement of operations, it was necessary to clear the land of a heavy brush which covered it completely. A drainage system also had to be set up, draining the surplus water into a creek which skirts the eastern edge of the property and empties into Whitemouth River.

During June, 1949, the large processing plant was struck by lightning about 6:30 one evening. Within half an hour a second bolt struck a nearby shed, and despite the efforts of the men to save the plant with the fire-fighting equipment they keep always ready, the buildings and diesel-powered machinery were a complete loss. They have now been replaced by new aluminum-covered buildings, housing new, more modern equipment, powered by electricity.

Although a fairly well-to-do farming area surrounds the bog outside a radius of about two miles, there is a feeling of complete isolation around the plant. The passing of the C.P.R. trains is the only visible sign of outside life, although telephone service is available to any part of the world.

By the time Mr. Thompson and I had been over the plant, and I had taken a few pictures and satisfied my curiosity regarding the "peat plant," it was time for the evening meal, and I was invited to have supper in the cook house. When we entered, the men were just finishing their supper, and each, as he left the table, carried his dishes to the kitchen.

Mr. Thompson apologized for the lack of table finery and cuisine, but there was no need for apology. Never did food taste so good—roast beef, fried ham, headcheese, fried potatoes, corn, peaches, chocolate cake, cheese, bread and butter, tea and coffee—all you wanted of it.

Having finished supper, a glance at my watch told me it was about train time, for I was going back to Winnipeg on the evening train. Hastily thanking my host for his kindness and help, I stumbled through the darkness over the unfamiliar, sodden ground, and the white and green lanterns were swinging from Mr. Thompson's hands, flagging the westbound train which would take me home. The headlight of the C.P.R. train No. 1 pointed its long fingers of light down the track, and the engineer answered the signal with two short toots of his whistle. In a matter of seconds I was homeward bound on the only train that was ever stopped just for me.

***The widespread use of the combine is making picturesque fields like the one above far less common.***

# Those Butter Imports

***Some convictions arising out of Canada's recently announced New Zealand purchase***

*by* **R. E. WESTMOUNT**

AUSTRALIA is running out of butter. It is now admitted that the Island Continent will have to import butter, or reduce its consumption.

Canada reached this position a couple of years ago, and there is every reason to believe that Canada will be an increasing importer of butter, if the population of this country goes on growing, and the standard of living is maintained. In the Canadian climate, butter is a necessary food.

Both of these countries were, up to a short time ago, much larger exporters of dairy products than is now the case. Canada concentrated exports chiefly on cheese, while Australia shipped butter. Now, they are both moving rapidly to the position where they will be net importers of dairy products.

Canadians, especially those in the cities, are apparently eager to make this situation worse. They have insisted on the government of the nation withdrawing from its former prohibition of the manufacture of margarine. The result is that margarine is being sold in Canada, and at prices which will discourage the maintenance of even the present volume of dairy production.

In a short while it will be noted that there is no unlimited supply of margarine available, to replace butter. As a matter of fact, the fats which go into margarine, most of them imported, are in very short world supply.

At the moment, competent observers point out that Canada, by substituting margarine for butter, is drawing on the insufficient world supply of fats, so that the people of poorer nations are going to find their supply reduced.

The only answer, of course, would be to permit the open market for butter to rise, and to leave it to the people of the cities whether they prefer to reduce their consumption of some other goods and services, in order to get butter, or to do without butter.

After all, no substitute has been invented for the system by which rising prices reduce consumption and increase production. It still remains the governing factor in all economic activity.

In every country experiments of all sorts are being made to find some way of evading this growing shortage of foodstuffs, and the resulting higher prices. In some countries subsidies are paid to farmers. In other countries, farm products are pooled under a compulsory system, so that their sale can be controlled. Farmers are beginning to suspect that all of these experiments are thought up by people interested in keeping the price of food to the city consumer down—not for raising the price which the producer gets.

In Australia, the dairy farmers point out that, under a fixed price for butter the year round, it no longer pays anyone to produce butter to be stored for the season of low milk flow. It used to be that someone could make a profit out of storing butter, in the season of high milk flow. Sometimes the individual farmer could make money this way. Sometimes the profits all went to a dealer, but the dealer in turn, in order to get his supply of butter to store, paid the farmer more than the open market would otherwise have given him, in the season of high milk flow.

That is now all abolished. A government board pays the same price the year around. The result is that there is no longer any inducement to produce a surplus above immediate demand to be stored for later use.

Perhaps, someday it is going to dawn on the governments of the free nations that the greatest problem which faces the world today is to obtain an adequate supply of food, and that the only method of doing this which has yet been discovered is to let the farmers get high prices for what they produce.

It should be a sign of the times when Australia and Canada begin to import butter.

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WOULD you like to try feeding sawdust to your livestock? Probably not. The chief constitutents of wood are cellulose and lignin, and in this combination, cellulose is not digestible. The reason straw, the hulls of grain and the shells of nuts are not considered good feed is because of the high proportion of cellulose they contain. Scientists, however, have now found that if sawdust is bombarded with electrons, cellulose becomes "available" and appears in digestible form, so that the organisms in the cow's stomach (bacteria) are able to change the cellulose into other compounds such as acetic, proprionic and butyric acids which can be absorbed in the animal's intestines.

# *Pioneered in Gold*

*Continued from page 7*

trail stride along the wooden sidewalks beside him. Young engineers just out of college rubbed elbows with swarthy breeds in from the traplines. There were few women. Most of those who had come to the silver camp stuck close to their homes. But lawyers, promoters, storekeepers, bank clerks, come-on guys, con men, fourflushers—George Bannerman could see them all as he drove slowly through the town's mud streets.

It was a day in the first week of June. Early morning had been cloudy but now the sun shone clear in a cobalt sky. It gleamed palely on haphazard unpainted buildings which had been hastily thrown up for shelter and for swift business. Not much stirring in town that hot June day. No one sensed that the golden gateway to all Pre-Cambria was about to open.

George Bannerman drove down the main street between the Maple Leaf and the Vendome Hotels. He saw the "brokes" loitering around the Maple Leaf corner, watching and waiting for the next rush and a grub stake. Among them were Harry Lemon and Tom Geddes, who had succeeded in drinking up every cent they had been paid for their last winter's fur catch. They were thirsty—and here was a wagon dripping along Ferguson Avenue, its driver sitting on sacks piled high on crystal-clear Lake Temiskaming ice. Water taken neat was a novel idea to them. They strolled out into the street.

"Ice? Sure thing!" responded Bannerman to their question. He cracked off several chunks and handed them over. Then he looked down in amazement as the pair tried to thrust some gold quartz into his hands in payment. George stared at them and at the ore. Lemon and Geddes began to talk as they sucked. The ice dripped silver in the summer sun.

The street corner wild-catters leaned against the Maple Leaf and watched idly. If they had heard the conversation they would only have spat derisively. Possibly Benny Hollinger was there or Alec Gillies—or "Sandy" McIntyre with all his whiskers unbrushed for a month. Future millionaires, all of them. The ice dripped on.

Haileybury's magnates wouldn't have cared much either. They had all seen those quartz samples—but they thought they knew too much. As Sudbury's nickel-plated moguls had despised the cobalt-bloom of the silver camp, so in turn Cobalt and Haileybury derided the gold of Porcupine. Later on, in 1913, Kirkland Lake would get the same treatment. Ask the ghost of the late Sir Harry Oakes about that! His narrow-set eyes always sparkled balefully when Haileybury or Cobalt was mentioned in his hearing.

But George Bannerman was neither a mogul nor a broke and he liked the look of that quartz. He went to two members of his church and got a grubstake easily; the backers retaining 50 per cent interest, Bannerman a quarter and the remaining fourth split between the trappers. With Lemon and Geddes he hit the trail for Porcupine Lake and when they reached it the trappers, who liked this easy-going friendly man, showed him the quartz where the gold could be seen with the naked eye. That outcropping was the nucleus of the Scottish Ontario Mine, afterwards renamed the Canusa and now defunct. It was the pebble in the crevice that split the north wide open.

ONE evening the three men were sitting between their black fly smudge fires when they saw a canoe approaching.

"Hello, fellows," hailed one of the two paddlers. "We spotted your smoke and came across. What's doing around here?"

"Nothing much except the flies," grinned Bannerman, drawing a big hand across a bloodied neck. Redheaded Harry Lemon, a faraway light in his pale eyes, hunched closer to a smudge and took no interest in the conversation. Dark Tom Geddes sat smoking a pipe with the mouthpiece gone, his chin bristles greasy with salt pork dripping.

"Prospecting, eh?" queried Jack Wilson, the canoeist who had spoken, as he stared at the quartz samples on the ground close to the fires. He stooped and picked up a piece. "All clay belt muskeg around this lake. Not much good for prospecting. I've been looking for asbestos, but can't find any serpentine rocks."

"Maybe there's gold here," ventured Bannerman, glancing gravely at the trappers who squatted Indianlike.

"Gold!" flashed Wilson—and then he saw it in a sample. In a few moments he and his partner were paddling hurriedly back to their camp on the southwest shore of Porcupine.

The summer twilight came golden across the water toward the three men sitting between their smudges. The sun hovered low over the wide bush solitude west to the Mattagami River and beyond and on to the Groundhog and the Kapuskasing—a great lone land through which the feet of many men would soon be blazing trails in pursuit of fortune.

Bannerman turned to the trappers. "That fellow won't get much. I kind of think we've staked up all the good gold rock hereabouts."

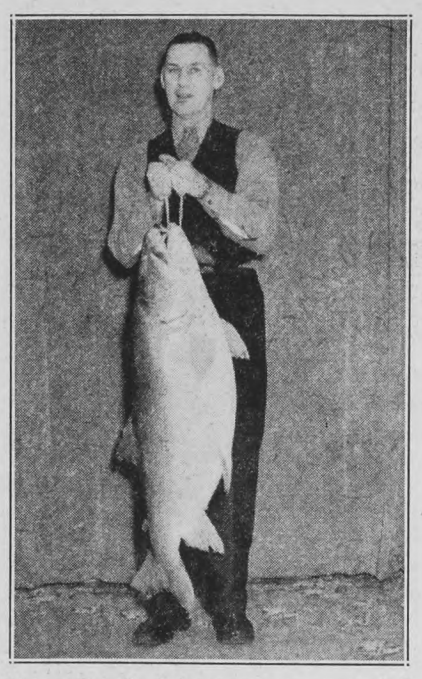
How wrong he was! Wilson and his partners staked the "Golden Pavement" to the east where there was a big quartz outcropping which the Indians called the "white rock." So the great Dome mine began.

Back in Haileybury again Bannerman and Wilson set the wires humming with messages and the town came awake. The Porcupine rush started, gathering momentum as good news came back to the town by moccasin telegraph. Rivers were choked with canoes as men paddled fiercely north to make their fortunes.

You can see some of the mines today that started from that wild staking. You can see some of the bustling mining towns—Timmins, South Porcupine, Schumacher—that sit where Lemon and Geddes ran their traplines and where young Bob Mustard walked an old fur trail to find new gold. The mines are shipping out solid gold bricks now, worth perhaps $25,000 each; McIntyre, Dome, Hollinger—the great golden giants of the north that grew from the find of two trappers near Porcupine Lake 44 years ago.

# More Fish with Fewer Casts

***A condensation from part of the 1951 report of the Fish Committee of the Saskatchewan Fish and Game League***



***This 49½-lb. lake trout was netted in the Saskatchewan north country last winter. It is not of record size, but . . .***

THE total poundage of fish in a stream or lake will not vary greatly from year to year. A body of water has a certain carrying capacity, determined by the amount of food present in the water. There may be a large number of small fish or a smaller number of larger fish but the combined total weight of fish will remain reasonably constant.

Normal fishing of a stream is not likely to change this total. It will however, have an influence on the number of fish caught by latecomers. The hook and line method, used by the sportsman, is selective fishing. Many game fish are removed and other species increase under the stimulus of increased availability of food. These other species become so numerous that they dominate the stream, and though there will be plenty of desirable fish they will have so much food before them that very few will be caught.

It is seldom correct to say that a stream is "fished out." It is actually in an unbalanced condition, and contains too many fish which cannot be caught. These must be removed for the future good of the lake or stream.

Fish that should be removed are usually such species as whitefish, tullibee, buffalo fish, perch, and the like. Commercial fishing, done under supervision, and aimed at the dominant fish populations, will greatly improve the number of game fish. The problem is one of balancing predator against prey. The predators (game fish) seldom become too numerous as they prey on their own young as well as on other food. The panfish (perch and the like) overpopulate the water very easily.

STOCKING a body of water with game fish fingerlings may not improve angling. If the reason for poor angling is an unbalanced fish population, stocking the lake with pike, pickerel and bass fingerlings would not solve the problem because these would be too small to do much toward reducing the dominant species. The solution here is to remove some of the fish that are causing the unbalanced condition. Although there is a place for stocking, it is not as important a method of providing good angling as it was once thought to be.

If consistently good angling is to be provided, research is essential. It is necessary to determine what fish are in the water and in what approximate numbers. Their food source and supply must be examined and compared with their numbers. The condition of the fish must be checked and compared with their age to check their rate of growth. In this way it is possible to determine what is on hand, before attempting to decide what is needed. In one body of water it may be necessary to take out some species of fish; in other cases stocking with game fish may be necessary, and in some cases both expedients may be required. It is impossible to determine what should be done unless a careful study is made of the problem, and good fish and game management then practiced.

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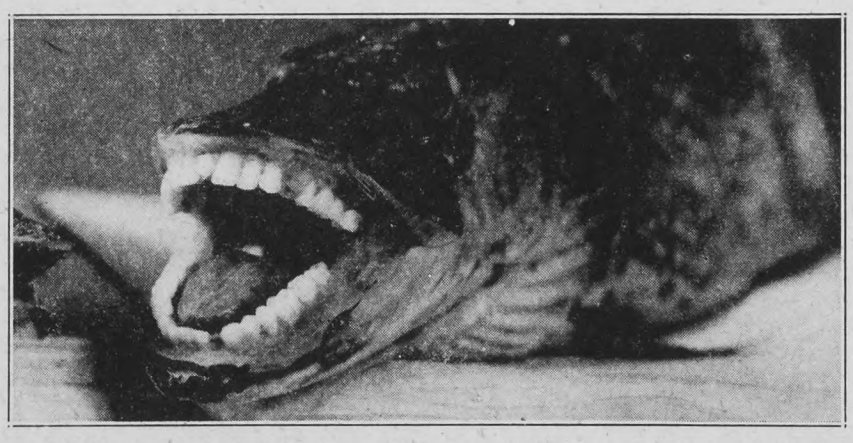
A BRITISH scientist, Sir Ben Lockspeiser, believes it is time for man to begin taming and breeding new strains of bacteria and other micro-organisms, in the same way that he has tamed other once-wild animals. These micro-organisms, like the larger animals we are more familiar with, are susceptible to changes in their food, environment and other treatment. At least some of them have already been "domesticated" for special purposes. Wines and beers are produced by using yeast to produce sugar solutions. The many new killer bacteria called antibiotics, which destroy harmful micro-organisms, are another illustration. Sir Ben believes that this possibility of breeding more able and willing workers among the micro-organisms may have a very profound effect on our health and industrial life.



***. . . Neither is this jack fish of record fierceness. The set of false teeth fitted in his mouth just make him look that way.***

# Soft Water from Hard

***The governing principle is simple and the construction of the softener not difficult for a handy man***

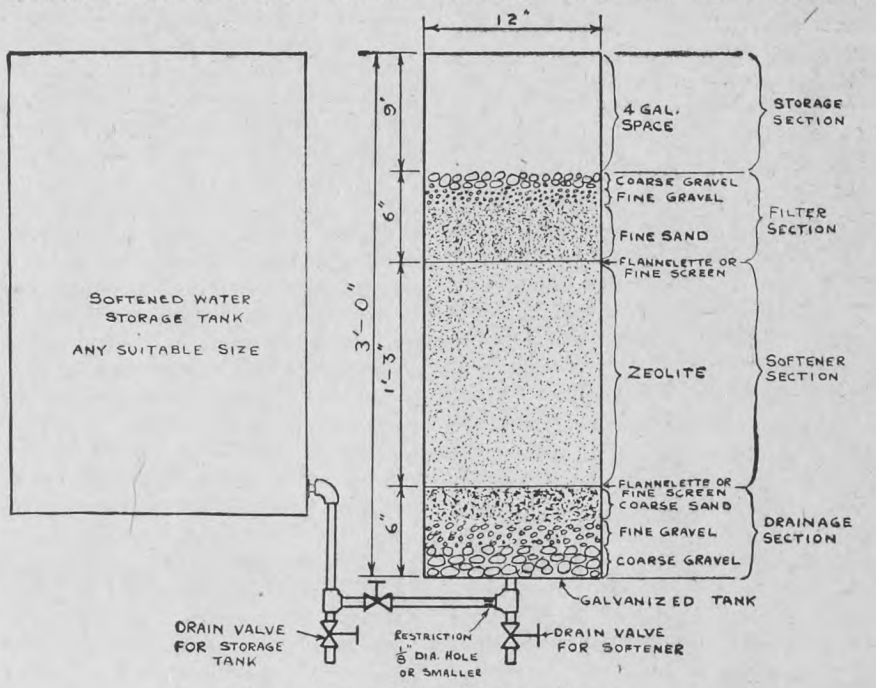
*by* **A. HENRY**

IN HOMES that do not have a water pressure system with a softener or a large rain water cistern, the problem of an adequate soft water supply can be solved at moderate cost with the apparatus shown in the accompanying diagram. This is a modification of the zeolite softeners sold by many firms for softening hard water in homes having water under pressure. Actually it is a miniature of the large gravity flow zeolite softeners used to soften water for industries, cities and towns.

Zeolite is the most common member of a group of natural and artificial materials that have the property of "ion exchange." It is a tasteless, odorless, insoluble, sand-like material. Because of its ion exchange property it can remove from hard water the minerals that cause the hardness by exchanging them for minerals that are not "hard." After it has been used for some time the zeolite becomes "saturated" with the hardness minerals and will no longer soften water. However, it can be regenerated to its original condition by washing it with common salt brine. After the brine has been rinsed out the zeolite is ready to soften more water. For normal hard water the cycle of softening and regeneration can be repeated several hundred times so that an initial quantity of zeolite will last for many years.

In the unit shown here the hard water (from a well or other source) is poured into the softener tank where the gravel surface prevents disturbing the sand and zeolite. The water is softened as it passes down through the zeolite bed. The flannelette isolates the zeolite from the sand and gravel so that they may be kept separate if removal is necessary. The bottom layers of sand and gravel provide drainage to the outlet. The softened water flows into the storage tank at a rate kept low (10-20 gal. per hour) by a restriction that partly blocks the pipe connecting the two tanks. The slow flow will allow perfect softening of very hard water and will give the longest possible softening period with a relatively small quantity of zeolite. Normal hard water is made as soft as the best fresh rain water, but is clear and clean, which is seldom the case with rain water from a roof. Also, it is softer than rain water is after storage in most concrete cisterns.

After a period of use which may be several days or weeks depending on the hardness of the water and the amount softened, it will be found that a sample of water taken from the softener drain is not completely soft. This means that the zeolite must be regenerated. To do this, first shut off the valve connecting the two tanks and then drain all the water out of the softener tank. Make up a strong brine solution of common salt and pour enough into the tank to cover the zeolite. Allow it to stand for half an hour and then drain off. Using fresh water refill and drain the tank twice. The softener is then ready for use again. The brine drained off and also the two lots of wash water should be discarded.




*Cross section of a water softener.*

A softener such as this can be made up using any suitable galvanized tank approximately the size shown. An old range boiler or hot-water tank with any leaks soldered is ideal. The tops of the two tanks should be at the same level so that the storage tank can be filled but will not overflow. The relative levels of the tank bottoms is not important but they should be high enough to allow draining.

To lessen the cost the two drain valves may be replaced by short lengths of rubber hose. These should be of such length that when one end is attached to the drain pipe the other end can be hung on the top of the tank. Then to use a drain simply lower the upper end of the hose until water runs out. Often this is more convenient than a valve. Rubber hose may be used in place of all the piping if desired.

If the hard water is very clear the filter sand shown may be omitted. However, the layers of gravel should be kept to prevent disturbing the zeolite. If the water is very muddy or dirty the small sand filter shown

here may not clear it completely and fine particles may be deposited in the zeolite so that its life would be shortened. In any case, if the filter sand is used it should be washed or replaced occasionally.

AS SHOWN the softener holds about one cu. ft. of zeolite. This amount of ordinary zeolite will soften from 100 to 500 gal. of normal hard water before requiring regeneration. The exact amount depends on the hardness of the water. As an example, in the writer's home the hardness of the water is expressed as 40 grains per Imperial gallon, or 565 parts per million compensated hardness, and the softener will make about 250 gal. of soft water before requiring regeneration. A cubic foot of zeolite costs $25-$30 and is available from plumbers and plumbing supply houses that sell commercial zeolite softeners.

Because there are some limitations on the type of water that may be softened satisfactorily with zeolite, it is better to have the water analyzed before purchasing the zeolite. This is done free of charge by the Public Health Departments of any of the provinces. Reliable suppliers of zeolite softeners analyze the water before they will make a recommendation of a softener. In general a type of zeolite recommended for a commercial softener will be satisfactory in this unit.

A common limitation for ordinary zeolite found in otherwise normal hard water from deep wells is the presence of iron. This is easily recognized by the formation of a fine reddish-brown sediment if a pail of the originally clear water is left standing exposed to the air for a few hours. If water containing appreciable amounts of this form of iron is used with the softener the fine brown particles may collect on the zeolite grains and eventually make them useless. This iron can be removed only by a special filter or by aeration followed by a sand filter.

Zeolite softened water is perfectly soft in the sense of its reaction with soap. Absolutely no curd or scum will form. The water feels "soft" and has no harmful effect on clothes or the skin so it is perfect for washing purposes. It should not be used for watering house plants any more than hard water would be used as it still contains the "soft" minerals which might accumulate in the soil to a harmful extent. Whether the softened water is better than the original hard water for cooking depends on the type of minerals in the original water. This can be determined only by trial of the softened water as the preference of individuals may differ. If it is intended to use the softened water for cooking extra precautions should be taken to keep the apparatus clean and sanitary.

# Muscle and Meat

***The changes which take place in tissue after slaughter can be controlled to provide superior meat***

*by* **TREVOR WILLIAMS**

THE universal popularity of the detective novel has made most people familiar—in the name at least – with the condition known as rigor mortis which occurs after death. Less generally appreciated, however, is the fact that rigor mortis is of daily importance to us all in our lifetime and not merely of academic interest in cases of violent death. The reason for this is that the post-mortem changes which occur in slaughtered animals profoundly affect the quality of the meat they yield. Inexpert slaughtering and bad storage can yield from a prime beast meat no better than may be obtained, under the best conditions, from an animal of indifferent quality. Because of this the Low Temperature Research Station at Cambridge, England, one of the laboratories of Britain's Department of Scientific and Industrial Research, has for some time been carrying out a careful investigation of the physiology of rigor mortis, the physiology of dying muscle. The results have already proved of considerable practical importance.

This research has covered a wide field, embracing the whole of the complex changes which occur in both living and dead muscle for, as a recent report from the laboratory puts it, muscle in the laboratory is lean meat in the larder. As the post-mortem changes follow on directly from those which occur during life it is evident that knowledge of the physiology of living muscle is, rather unexpectedly, very relevant to the problem of a better meat supply. Muscle goes on living long after the death of the animal of which it forms part, but the sudden cessation of certain vital functions, notably breathing, causes an immediate change in the processes which occur in the muscle. As long ago as 1907 Fletcher and Hopkins, at Cambridge, showed that after death a starch-like substance found in muscles, known as glycogen, is converted to lactic acid, the acid commonly found in milk. Some years later an energy-rich chemical known as adenosinetriphosphate (ATP) was isolated from muscle. The important role of ATP is now becoming clear.

It has been found that the stiffening which occurs during rigor mortis is always associated with the disappearance of ATP; this substance seems to

be the immediate source of energy for muscle movements. It has also been found that the muscular shortening which also occurs during rigor mortis depends upon the rate at which ATP disappears. These discoveries have been made by studies of both whole muscles and of individual fibres under the microscope.

These three post-mortem changes—acid production, stiffening, and shortening of muscle—are all important in relation to the supply of meat under modern conditions, which often entail the lapse of many months between the slaughtering of an animal and its appearance on the table as food. They have a profound effect on the state of the fluid retained within the meat. Under some conditions the latter will drip out freely when the meat is cut; this is a serious defect and much effort has been directed to overcoming it.

Elimination of this tendency to drip is being sought in two ways: by controlling the physiological processes which go on in muscle before death, and by modifying the processes of freezing and thawing. It has been discovered that the tendency of meat to drip after freezing and thawing is directly related to the acidity of the muscles. If this is kept low enough the tendency can be almost entirely eliminated, but in practice this presents considerable difficulties. Some means must be found of depleting the animal's glycogen reserves just before death so that little or none is available for producing lactic acid. For fresh meat, on the other hand, which is not to be subjected to freezing and thawing, a high acidity is preferable, because this inhibits the growth of the microbes which cause meat to spoil.

THE shortening of the muscle fibres which occurs after death most probably also increases the tendency for frozen meat to drip after it thaws; for the contraction would be expected to squeeze out some of the liquid. Before rigor mortis sets in meat is dry to the touch but afterwards it is perceptibly wet. On whaling ships practical use is made of this simple test to determine the proper time for preserving the meat.

At first sight it might seem that a solution of the problem would be to freeze the meat as quickly as possible, before the process of rigor starts at all. In practice, however, this has been shown to be useless, for the process is then merely delayed until the meat is thawed, and then proceeds so much faster than otherwise that the drip from the meat is in fact increased.

If properly carried out the chilling of meat can actually improve its quality. For example, beef stored at a temperature just above freezing-point was found to be much more tender after a fortnight than it was within a couple of hours of going into store.

Important though these studies are to an improvement of the world's meat supply, they are potentially of still greater value in quite a different direction. It has long been realized that the mechanical efficiency of living muscle, expressed in terms of the useful work it can do for a given consumption of fuel, exceeds that of any machine yet made by man. It may well be that in an artificial duplication of the chemical changes which occur in muscle we shall have a most valuable new power unit.

# The Countrywoman

## Mostly about Ourselves

WE are happy this month to introduce a new pattern service to readers of The Country Guide. Simplicity styles are recognized today as among the leading standard patterns, because of their good design and practicability. Their use is recommended by many teachers of home sewing. A noted feature is that the cutting outline is "printed" on the paper. The directions are simple and easy to follow. Reports are that the number of patterns ordered is steadily on the increase and has in some cases increased as much as 30 per cent in the last year, indicating that home sewing is increasing.

The Simplicity designs shown in The Country Guide may be ordered from the nearest retail dealer who carries them, or direct through this magazine. When country women go to town on a shopping trip, they do not always have time for a leisurely study of fashion catalogues. Some are out of touch with the larger retail stores. They welcome the opportunity to select designs quietly at home and order by mail. The Country Guide welcomes the opportunity to be of service to its readers in as many ways as are possible.

And while we are on the subject of features of interest, we mention the article on making A Down Comforter, complete with directions, sent in by a contributor. The old-fashioned feather tick went by the board for sanitary reasons but there are some who will remember its soft coziness, especially in winter. The price of wool today makes the purchase of a sufficient number of blankets almost prohibitive for the average family. Yet in this climate we need plenty of warm bed coverings. Travelling in northern European countries last summer, we were impressed with the number of down comforters used and the scarcity of the usual blankets. A large cotton envelope or slip was used over them. Such a slip can be washed easily and often. If you have a supply of down, why not provide such a comforter?

Are Canadians, generally speaking, rabbit eaters? The answers varied but a surprising number of menfolk answered "yes." It seems that it matters if there happens to be an old-country person a member of the household. The price of meat being what it is today, and the tasty recipes provided by Henrietta K. Butler in this issue, may result in quite a number of rabbit suppers being provided in western Canadian homes.

Kerry Wood has another story about a small-town minister in this issue. When Prentice G. Tanner managed to get his tongue tangled up in an egg beater in a story by this author, used in February issue The Country Guide, clergymen seemed to enjoy the story as much as did other readers. One wrote asking permission to convert the story into a one-act play. Another said that he would like to make it into a dialogue for use in a church group. It seems that Kerry Wood has created a character that is going to be remembered—and you see a little more of him in The Parson's New Church. Katherine Howard, another Albertan author, has had a suggestion from a fiction agent in the United States that her popular stories concerning Mr. Beelby, which have appeared in The Country Guide, should appear in book form.

A story by H. Gordon Green of Montreal, The Man Who Waved a Flag, which appeared first in The Country Guide, was selected along with 17 others in 1950 to appear in a book Stories of Christian Living, edited by J. Edward Lantz and published by the Association Press of New York. These are some of the satisfactions in publishing a magazine which we like to share with our readers.

## Overcoming Anxiety

***We note a new feature—ideas practical and fictional—and a contributor's viewpoint on a common symptom***

**by AMY J. ROE**

ANXIETY is the anticipation of danger. Normally, it exists in the unconscious mind. It does not penetrate into the conscious mind until the thing we fear becomes known. Unexpected danger produces normal anxiety due to shock. If the danger is real and we cannot escape it, we cannot act effectively, and so fear is present. This tension is then transformed into normal anxiety.

There are several types of anxiety. There is, for instance, that caused by a feeling of isolation, of not belonging. All normal types of anxiety arise in childhood at which time they are rather frequent. The child cannot analyze the nature of danger, nor does he know how to escape it. Anxiety arising from isolation and not belonging is one of the first emotions appearing in the infant. Normally, it appears first when the baby is weaned and has to face the unknown world alone. Normal infants soon overcome this feeling.

Anxiety is also the fear of being destroyed, without the possibility of self-defence. It is fundamentally the fear of death. It differs from ordinary fear in that it has no definite object in which to attach itself. It is the fear of the unknown, the unusual, the indefinite. It produces a state of helplessness, since no purposeful action is possible against an unknown danger. It creates mental confusion and may paralyze physical activity, because the nervous tension cannot be released; neither can a state of security be achieved. If this anxiety is of brief duration it is normal; if it persists, it becomes abnormal.

The type of anxiety which often attacks most of us is what is called free-floating anxiety. It brings about a general pervading sense of doom, unattached to immediate reality. It is the type of anxiety that lies in wait for some event to attach itself to: to a child's serious illness, a death in the family, the loss of a large sum of money, the loss of an important position.

Very often you will hear a person say: "I have a feeling that something awful is going to happen. I feel it in my bones." If nothing bad actually takes place, the feeling of impending disaster is forgotten. The anxiety floats away as freely as it came—to be back again as soon as the person is caught off his guard. He will again wait for something bad to happen to justify that curious pervading heaviness.

Anxiety quite often results in various disagreeable bodily sensations. The most common of these are: fatigue, which is the result of prolonged increased tension of the muscles; weakness, due to too great expenditure of emotional energy; pains in the neck, due to muscular tension of the neck muscles; head pains and pressures, particularly constricting sensations, also due to muscular tension.

All of us are subjected to anxiety at times. Anxiety is a universal phenomenon of our times. Today it is more widespread than ever before. Insecurity is commonplace, and anxiety about the future is plaguing almost all of us. Anxiety normally keeps us alert. It becomes bothersome and harmful when it recurs persistently in inappropriate situations.

The anxious individual is far from being a happy one. He has certain drives and characteristics which keep him in a constant turmoil. He is usually conscientious, overly meticulous about details, worrisome, especially if events do not fall into their customary grooves. In general he becomes mildly upset if there is a disturbance in the regular routine of activities. Such individuals continue with their work, but have an increasing amount of tension which leaves them uncomfortable and on edge.

Let us examine a typical anxiety reaction. It usually begins with some disturbance such as family and marital problems, vocational problems, lack of relaxation, etc., and these lead to feelings of inadequacy and insecurity, which in turn result in a feeling of anxiety.

What are the typical bodily reactions in anxiety? Briefly stated, the most common are: difficulty in breathing; pain in the region of the heart; palpitation of the heart; dizzy spells; increased perspiration; generalized weakness and exhaustion; pains and cramps in the stomach; headaches.

What does the person who is anxious complain of? Here are the most frequent of these complaints: fear of indescribable danger; fear of impending illness; irritability; insomnia; restlessness; loss of appetite; sluggish thinking; feelings of confusion.

What are the common signs observed in persons suffering from anxiety? Cold, moist hands and feet; dry mouth and lips; variations in the rate of the pulse; variations in the blood pressure; tenseness; abdominal muscles rigid and tense; colon feels tender; the reflexes are exaggerated.

If anxiety continues for any length of time, it begins to produce ill effects on the various organs of the body: the heart, the stomach, the blood vessels. At first, these changes may be of a temporary nature, but if the anxiety continues, the changes become permanent. That is, the organs actually become diseased. It is for this reason that anxiety should be recognized as soon as it becomes established, and that measures to overcome it should be undertaken at once.

There is much that can be done to overcome anxiety. It may require some effort and will power. The results in the end will be well worth any effort you may expend.

Anxiety is often dispelled by learning how to relax. Relaxation gets rid of the tension of the muscles. Let your muscles become limp and lax. Lie down and, beginning with your facial muscles, cause them to relax and then proceed down to the muscles in the neck, and so on, till you obtain complete relaxation all over your body.

Another good method of allaying that dreadful feeling of anxiety is by recreation. Devote a few hours a day to some sort of recreation, active or passive. Play Canasta, or bridge, or golf, or other games or sports that are attractive to you. Or, go to the movies, the theatre, the concert, the ball game, for passive recreation.

You may prevent anxiety by gaining an insight as to the particular conditions which bring it about, such as getting into arguments, being pushed into conditions of excitement, mingling with crowds, competition, being pushed with respect to the amount of work put out within a given time.

The more successful the adjustments to life demands are, the more successful one is in attaining a sense of inner harmony, and abolishing the feeling of anxiety. Quite often, this means a re-evaluation of goals and standards. Success is not the attaining of much money or property, at the sacrifice of ethics and true inner satisfaction. Success is not the attaining of fame at the expense of crippling one's sense of satisfaction and peace of mind. A successful human being is one who is well adjusted within himself, and also with the world. Such a person seldom experiences anxiety.—*Edward Podolsky, M.D.*

## I Have Lived with These

*I do not know that I shall kiss again*
*The lips of summer or the brow of spring*
*Or touch the hand of golden autumn when*
*She sits enraptured of remembering.*

*So now there is no dawn I do not see,*
*No day in which I do not find delight*
*And I sit, speechless, when in ecstasy*
*The moon pours out her passion on the night.*

*Let death come down in darkness and in pain—*
*I shall not fear it! I have lived with these*
*And my small dust will find the tender rain*
*And lie in rest beneath the singing trees.*

—Gilean Douglas.

*Pupils at Chauvin enjoy hot Irish stew with their noon lunch.*

# Lunch at SCHOOL

***Parents and teachers in two Alberta schools work together to provide school lunch programs resulting in better health and more alert minds for their children***

*by* **LILLIAN VIGRASS**

THIS is the story of how two school districts in Alberta planned and organized school lunch programs. One is at Barrhead, 100 miles northwest of Edmonton, the other at Chauvin, in the Wainwright school superintendency. Each is a composite school, serving a large surrounding rural area as well as the town.

Both Barrhead and Chauvin schools make it possible for the pupils to have a hot-dish accompaniment to their sandwiches and dessert each day. The two systems differ in many ways but in each case it serves its purpose well without too much work for any member of the teaching staff. Each, also, is an example of what can be accomplished when parents and teachers work together on a mutual-interest project.

The Barrhead school uses the hot-jar method of providing a hot food in its school lunch program. This is the method often and most successfully used by the one-room rural school. It is equally successful in the large composite school.

The new school was opened in Barrhead two years ago. At present 750 children attend, the majority of which are brought in by van from surrounding rural areas. The main building, which was built at the time of consolidation, is located behind the old Barrhead school. It is a combined school and community center, so designed that the classrooms can be closed off and the building used as a community hall with a separate entrance to the south and only one storey high. The community center consists of a large combination gymnasium and auditorium with stage, a small kitchen, and a banquet room and library combined. These rooms are used daily for school lunch, for recreation and for home economics classes; at night they are a modern community center.

The school lunch program was initiated and organized by the teachers of the school and is under the capable supervision of the home economics teacher, Miss Anne Pawlowski. She is assisted by committees of teachers and students who assist in supervision during the lunch hour and do the monitor work. It is the enthusiasm and hard work of Miss Pawlowski, however, that has maintained the high standard for noon lunches in the school.

The children carry their lunches as usual each day. Included in each lunch is a jar of food to be heated. These jars are uniform in size and shape, and attached to each is a small metal tag on which a number is punched. The numbers are in series with a different series for each class. The jars can thus be quickly grouped to be claimed by the owners.

DURING morning recess two children from each room collect the jars and bring them to the kitchen to be heated. The jars are then placed in water in large, shallow, galvanized tanks. The tanks were made to special dimensions by the local tinsmith and easily accommodate 200 jars. They are rectangular in shape and fit over three-burner propane hot plates located along one wall of the kitchen. Each tank has a tap at one side near the base from which the water can be drained when lunch is over. The jars take a little over an hour to heat, then shortly before noon a committee of two pupils removes the jars from the hot water and places them in labelled sections on a long table where they are quickly identified by their owners. The children are then at liberty to eat their lunches in the adjoining banquet room or return to their own classrooms.

A hot-lunch program has many advantages. There has been a definite improvement in the quality and variety of school lunches noted by the teachers in the Barrhead school. Pupils are encouraged by their room teachers and by the home economics teacher to select nutritious foods. They, in turn, take home their ideas and ask for lunches which contain the essential foods. Mothers can quite easily plan a balanced lunch each day as the food in the jar is selected when the lunch is packed. Thus the meal can be planned as a whole and of foods which the youngster enjoys.

The eat-and-run way of lunching is discouraged as the children gather sociably around a large table. Conversation flows merrily and the lunch hour becomes a time of relaxation. Manners are more noticeable here, too, and the teaching of good table manners, mainly by example, becomes a part of each meal.

Preparation of the lunch at school requires a minimum of equipment. All dishes and eating utensils are brought from home. All that is required is a dependable source of heat and a shallow tank or wash boiler. It also means there is no need for dishwashing in the school kitchen. Large numbers are thus accommodated with a minimum of fuss and bother for teachers and pupils.

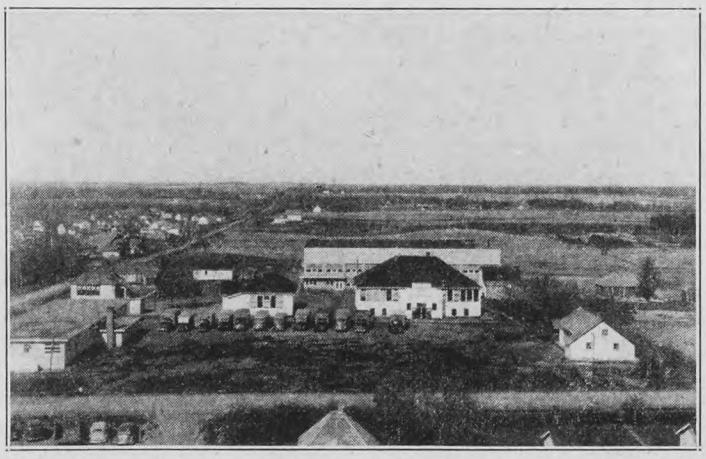
Last but not least, this scheme provides the most inexpensive lunch as all food comes from home. The equipment consists only of the two tanks and propane burners. The two galvanized tanks were provided by the Barrhead Home and School Association at a cost of approximately $70. The cost of the gas or other heating units depends upon the type installed. In Barrhead a considerable price reduction was given by the gas company in consideration of the fact that the equipment was for school use. The cost of the fuel itself is negligible in a project of this type.

The hot-jar method can be easily adopted by rural or larger schools. Organization and a great deal of enthusiasm are the only prerequisites.

THE Chauvin school has an equally efficient school lunch program although it is of a very different type. Here the supplementary hot dish is prepared in quantity in the school kitchen and served to the youngsters at noon to accompany the lunch they bring from home.

When the Chauvin school was built two years ago an extra classroom was included in the plan. The Public Health nurse of the Wainwright Health unit, Miss Lillian Tweedie, and the school superintendent, Mr. Simonsen even then were hoping and planning for a school lunch program to be introduced in the new school. The plan was suggested to the Home and School Association at Chauvin who took up the idea and started work on the new school lunch program.

It was decided by the Home and School Association that it was wiser to provide a hot-



*Above: An aerial view of Barrhead showing the new school built behind the old.*

*Left: Many helpers make dishwashing fun in the Chauvin school lunch room.*

*Right: A group of Barrhead children enjoy a hot lunch in the school banquet room.*

dish supplement to the lunch brought from home rather than to attempt a full meal. The hot dish would be prepared by a lady in the district who could come in each day. Mrs. Goedes, mother of two of the children, who lives near the school, arranges her work so she can come in from ten to twelve each day to prepare the lunch. Mrs. Goedes actually often begins preparations the night before at home. For her help she receives a gratuity of $1.00 an hour or $2.00 per day.

THE Home and School Association have a special committee to care for all arrangements. On the committee, which includes men as well as women, there is one representative from each district of the composite unit. At the end of each month, the committee meets with Mrs. Goedes to find what progress has been made, to plan the menus for the next month and to prepare the food orders.

As the menus are planned well in advance and a copy sent to each home, the mothers, too, know what is to be served each day. The lunch brought from home can be planned with this in mind. The menu for the week of January 8 to 12 looked like this: Monday—vegetable soup; Tuesday—rice pudding; Wednesday—cocoa; Thursday—Irish stew; Friday—home-baked beans. Other foods included in the menus during the winter were baked potatoes and minced meat; shepherd's pie; macaroni and cheese or tomatoes; scalloped potatoes; omelets; creamed vegetables; soups and milk puddings.

Space for cooking and serving at Chauvin is limited so the privilege of having a hot lunch at school is restricted to out-of-town pupils. As the savory odors drift down the halls when noon hour approaches envious remarks from youngsters who must go home for lunch are common.

The pupils are charged the actual cost only; the money is collected in advance. The first year the charge was five cents a meal but in 1950 was raised to six cents or $1.25 a month for each pupil. The Home and School Association are ready to give financial assistance when needed to keep the program in operation. This has not been necessary, however. No student is deprived of a hot lunch for lack of funds and in certain cases the local Red Cross has paid for a family who otherwise would not have been able to participate. Collections are not difficult at any time, Mr. Fabian, the principal, reports.

Costs are low for several reasons. Basic supplies are bought wholesale for a year at a time. Last fall, a half beef was bought prepared for stews, hamburger, etc., then frozen and stored in the cold storage locker. All vegetables are donated by the people of the district.

In the fall of 1950, Mrs. Spence, president of the Home and School Association called a school canning bee. The women of the district gathered in the lunch room to can the surplus fruits and vegetables which had been donated for the purpose. They brought their own canning equipment; the jars and cans were purchased by the Home and School Association. In one day over six dozen two-quart jars and 100 cans of vegetables were canned.

The equipment for the lunch room consists of a propane gas range, a single sink and three cupboards with a counter top. Dishes and cutlery, pots and pans belong to the school and are kept in the kitchen end of the room. The school has a private water system. The tables in the room are also used for table tennis, other games, and for studying. The benches can be stacked and the tables moved to one side if the room is to be used for any other purpose. In addition a small storeroom has been set aside as the school lunch storeroom for extra supplies and vegetables.

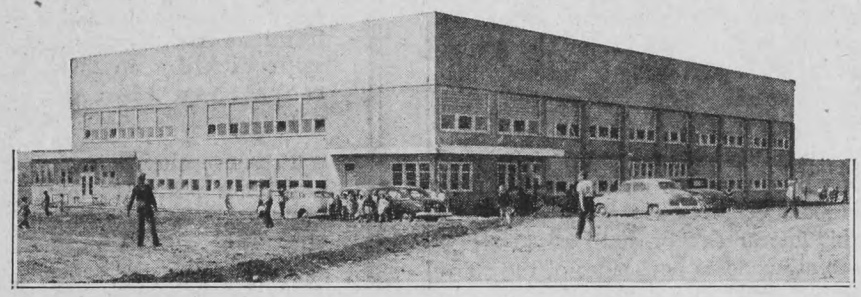
The youngsters are enthusiastic about the program. They are willing to help and find none of the cleaning up hard work. All the after-lunch chores are done by the students. One teacher is always present and each week monitors are chosen—four pupils to serve; two to clean the tables; four to wash dishes; two to sweep, and two to put away the tables.

The advantages of a good school lunch program are evident in the Chauvin school. The good health and alert attitude of the children have been noted by every teacher in the school. The children now seem to learn better in the afternoons than formerly and there seem to be fewer epidemics and colds than ever before in the district.

Chauvin lunch program is a good example of the spirit of co-operation between teachers, parents and children. There is a gain in the understanding of the problems of each and a working together to solve these difficulties. The children are proud of their program, they do their share of monitoring cheerfully, in fact happily, and are even envied by those who cannot participate in the plan. There is education in such a program, education in co-operation and working together, as well as education in the value of well-planned and nutritious meals.

The credit for the program goes to many, to Miss Tweedie for her efforts in initiating the plan, the teachers who work to put it over, the Home and School Association who spend time to meet and plan the work, and to Mrs. Goedes who turns up so faithfully and cheerfully to prepare the lunches.

There are a few disadvantages in such a scheme, however. The cook



*Barrhead's modern combination school and community center with public entrance to the left.*

must live near the school and be willing to give up at least two hours every morning to work at the school. Equipment is more extensive than the hot-jar method and it is slightly more expensive. The advantages, however, far outweigh the disadvantages.

These are but two methods of serving a hot supplement to the noon lunch at school. They are due to the enthusiasm of many or a few, but they are of definite value to every child who participates.

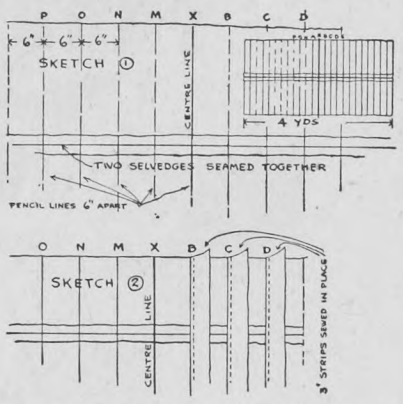
It may be noted that these are more than hot supplements to the noon meal. They are school lunch programs with education stressed—education in well-balanced meals.

A hot dish may not be essential during the warmer summer months but a good lunch is still necessary and the school lunch program should continue. Its integration with classes in health education, home economics and even physical training will help to make the classes apply to the children themselves as well as emphasize the importance of proper eating habits. Variety and quality in lunches are made important, and parents and children alike have become more nutrition-conscious.

# A Down Comforter

***How to make a coldproof bed cover***

*by* **BIRDIE GRAY**




A DOWN comforter with no "cold spots" can be yours for the making. Narrow strips of material are stitched to the upper and lower sides of the comforter to form four-sided tubes into which the feathers are poured. In this way there is no spot where the two layers of ticking are stitched firmly together. The feathers will not, therefore, pile up in the center of each quilted section as they ordinarily do, but will stay loose and fluffy.

This feathers-in-tubes construction can also be used on a smaller scale for mattress pads or padding for garden or window seats. The method is the same for each.

Materials required for a full-sized feather tick are eight yards of the best grade of ticking (approximately 32 inches wide), and one and three-quarter yards of other ticking (not necessarily of as high a grade), to be cut lengthwise into three-inch strips. If the large piece of ticking is 36 inches wide it will be necessary to buy two yards for strips. A plain, light color is best since it will be necessary to mark the inside of the ticking with pencil lines.

Cut the eight yard piece into two four-yard lengths and seam together two selvedges to form a flat piece four yards long and two widths of ticking wide. Draw lines, crosswise, with a pencil, six inches apart on the entire inside of the cover as shown in sketch 1. Draw the first line down the center and work out each way from it.

Soap the inside of the ticking with a soft laundry soap, especially along the seams and pencil lines. The feathers cling to the soap and more feathers cling in turn to these. This is the first step in securing a snug comforter.

Beginning at one end of the comforter material, wrong side up, place one of the three-inch strips along the pencil line, with the strip to the right of the line. Stitch in place, using a three-eighths-inch seam. Repeat with a second strip to the right of the second pencil line, and so on until 11 strips are sewn into position. Leave the center line without a strip (sketch 2).

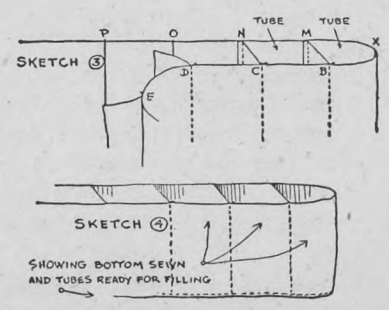
Once all the strips are attached, turn the ticking entirely around so the strips are to the left of the center line. Slip the material under the head of the machine until you reach the center line. You will now stitch these same strips to the other half of the comforter, beginning with the strip closest to the center line. Omitting the center line entirely, attach the other side of the eleventh strip (B) to the line to the left of the center line (M), again using a three-eighths-inch seam. This forms the first tube (sketch 3).

Move the material to the right until the line second from the center (N) is reached. Join the tenth strip (C) to this line and so on until all 11 strips are attached to both sides of the comforter. Fold in the end and seam, to form the last tube.

Fold in the selvedge edges of one side of the comforter and join them so that the seams attaching the strips to the front and back are on top of each other. Stitch twice (sketch 4). Fill the tubes with feathers, putting an equal amount in each. Fold in the remaining side and stitch as before.

Making these tubes is simple if they are made as directed—one side at a time and in succession. The first joining of strips begins at one end and works toward the center. The joining of the strips to the other half begins at the center and works outward.

If you are in doubt, experiment with a piece of muslin, about six inches by 18 inches and five strips one-inch wide and six inches long. Draw pencil lines two inches apart and follow the directions carefully.



# Tomatoes in Season

***A favorite among vegetables, fresh tomatoes add flavor and color to fall meals***

HOME-GROWN tomatoes with their wealth of Vitamin C are a welcome addition to any meal. Serve them as often as you can while they are fresh, whether raw as in salads and sandwiches or broiled, pan fried or stuffed and baked. Especially good are pan-fried green tomatoes. They take a little while longer to cook but they are even more flavorful than the ripe and they do not break up as easily while frying.

The extra tomatoes are easily canned for winter use. The cold-pack method is easiest and perfectly safe for a vegetable with a high acid content. Any tomatoes which are not perfect may be canned as tomato juice. Be sure to cut away any soft spots before cooking or extracting the juice, however.

### Baked Stuffed Tomatoes

6 *medium tomatoes*
1 *tsp. salt*
⅛ *tsp. pepper*
1 *c. dry bread crumbs*
1 *hard-cooked egg, chopped*
1 *c. ground ham*
2 *T. diced green pepper*
1 *T. diced onion*

Wash tomatoes; cut a thin slice from stem end and scoop out pulp. Sprinkle inside with salt and pepper. Mix remainder of salt and pepper with other ingredients. Fill tomatoes with mixture, heaping it at the top. Butter another 3 T. of bread crumbs and sprinkle over stuffed tomatoes. Place in a well-greased pan. Bake at 400° F. for 25 minutes or until tender.

### Quick Tomato Salad

Tear lettuce into bite-size pieces and place in a large bowl. Cut 4 solid tomatoes in quarters. Arrange on lettuce. Chop ¾ c. celery and 2 hard-cooked eggs. Sprinkle over tomatoes and lettuce. Pour ½ c. French dressing over salad. Serve immediately.

### Fried Green Tomatoes

Cut unpeeled green tomatoes in ½-inch slices; dip in seasoned flour or fine bread crumbs then in egg and again in bread crumbs. Fry in small amount of bacon fat or butter until brown. Turn and brown other side.

### Baked Tomato and Egg

Cut a thin slice from the top of each tomato. Scoop out enough pulp for an egg to fit in. Sprinkle well with salt and pepper and chopped onion. Bake in a 400° F. oven for ½ hour or until tender. Remove; break a whole egg into each tomato. Salt, pepper and spread buttered crumbs over each egg. Return to oven until eggs are set.

### Scalloped Tomatoes

6 *large tomatoes*
*Salt and pepper*
*Grated cheese*
*Bread crumbs*
*Butter*

Skin tomatoes and slice. Arrange by layers in a greased baking dish adding a seasoning of salt and pepper and a thin layer of crumbs topped with several pieces of butter between each layer. End with a layer of crumbs. Add bits of butter or other fat and bake 30 minutes in a moderate oven, 350-400° F. Grated cheese may be added to each layer or to the top one only.

### Scalloped Tomatoes and Spinach

3 *lbs. spinach*
6 *T. butter*
1½ *tsp. salt*
*Dash pepper*
2 *c. tomatoes*
4 *T. flour*
½ *tsp. sugar*
1 *whole clove*
1 *bay leaf*
1 *T. minced onion*
¼ *green pepper*
¼ *c. soft bread crumbs*

Cook spinach in small amount of water; drain. Add 2 T. butter, ½ tsp. salt and pepper. Combine tomatoes quartered, bay leaf, salt, sugar, clove, onion and minced pepper. Melt 3 T. butter in saucepan; stir in flour; add tomato mixture and cook until thickened (15 minutes). Arrange with spinach in layers in greased casserole. Top with bread crumbs and remaining butter. Bake in moderate oven (375° F.) for 20 minutes or until brown.

### Baked Tomatoes

4 *small tomatoes*
1 *small onion*
¾ *c. milk*
*Salt and pepper*
2 *T. butter*
2 *T. minced parsley*
1½ *T. flour*
¼ *tsp. celery salt*

Make a white sauce of flour, butter, salt, pepper and milk. Add celery salt. Put half sauce in bottom of four individual custard cups or baking dishes. Add the peeled whole tomatoes; cover with the remaining sauce; sprinkle with minced onion. Bake in moderate oven (375° F.) for about 30 minutes. Sprinkle with chopped parsley. Grated cheese may be sprinkled over tomatoes before baking. Serves 4.

### Canned Tomatoes

*Cold Pack Method*

Wash tomatoes. Immerse in hot water for one minute or until the skin is loose. Peel; cut off blossom end and core. Pack whole tomatoes in clean jars. Press down just hard enough to form enough juice to fill the spaces and cover tomatoes. Fill to within ¼-inch from the top. Add 1 tsp. salt per quart. Add no water. Seal partially or completely as desired. Process in boiling water bath. Pint jars require 35 minutes, quarts 45 minutes after boiling commences.

***Baked stuffed tomatoes is a favorite for lunch or supper this time of year.***

# Desserts from Bread

***Extra good puddings and cakes can be made from leftover slices***

THERE was a time when bread pudding was made only because it was thrifty. These bread desserts, however, will be made for their extra-fine flavor; their thriftiness is just another point in their favor.

Once you have tried these desserts, dry bread won't be allowed to accumulate in the bread box again. In fact, you will be waiting for the left-over slices to dry out. Easy to make and inexpensive to serve, the flavor does not suggest that these desserts have bread as their basic ingredient.

### Crunchy Top Cake

(To be served hot)

¼ *c. shortening*
¾ *c. sugar*
1½ *c. cake flour*
2 *tsp. baking powder*
¼ *tsp. salt*
½ *c. milk*
1 *tsp. vanilla*
1 *egg*

*Topping:*
2 *c. small dry bread cubes*
2 *T. melted butter*
2 *T. sugar*
¾ *tsp. cinnamon*
½ *c. chopped nuts*
½ *c. sour cream*

Cream together shortening, vanilla and sugar. Add egg. Beat until light and fluffy. Sift together dry ingredients. Add alternately with milk. Pour into pan 11 by 7 inches. Mix together ingredients for topping. Sprinkle over batter, bake in moderate oven, 375° F. 25 to 30 minutes. Serve hot.

### Mock Brownies

¼ *c. shortening*
⅔ *c. sugar*
3 *eggs*
3 *squares chocolate or*
¾ *c. cocoa*
1 *c. dry bread crumbs*
3 *T. flour*
¼ *tsp. salt*
½ *tsp. vanilla*
½ *c. walnuts*

Cream shortening and sugar. Beat eggs well. Add to sugar and shortening. Add remaining ingredients. Combine until no white spots remain. Pour into greased pan 9 by 9 inches. Bake at 350° F. 30 to 35 minutes. Cut into 12 pieces.

### Chocolate Crumb Pudding

1 *square chocolate*
2 *T. butter*
¼ *tsp. salt*
1 *c. milk*
2½ *c. soft, small pieces bread*
2 *eggs, separated*
¼ *c. sugar*
¼ *c. nuts*

Combine chocolate (or four tablespoons cocoa), butter, salt and milk in double boiler. Heat until chocolate dissolves. Add soft bread; blend. Beat egg yolks well and blend in sugar. Add a little hot mixture to egg yolks, then stir into mixture. Cook over hot water until thickened, stirring constantly. Be sure no white spots remain. Stir in nuts. Beat egg whites until stiff. Fold into mixture. Cover; steam in double boiler 15 to 20 minutes. Uncover and cook 15 minutes more until pudding loses its gloss. Serve hot with whipped or plain cream or a vanilla sauce.

### Orange Bread Pudding

¾ *c. scalded milk*
1 *c. stale bread*
¾ *c. orange juice*
3 *eggs*
*Grated rind of orange*
½ *c. sugar*
¼ *tsp. salt*

The bread should be stale but not dry and hard. Break into small pieces or cube, then measure. Soak for 10 minutes in scalded milk. Beat eggs; add with remaining ingredients to bread mixture. Stir until sugar dissolves. Pour into individual buttered molds; set in a pan of hot water. Bake in moderate oven 375° F. for 30 minutes or until the mixture will not adhere to a knife inserted in the center. Serve hot with hard sauce or chill, unmold and serve with whipped cream.

### Bread Pudding

2 *c. milk*
1 *T. butter*
1 *c. stale bread*
¼ *c. sugar*
¼ *tsp. salt*
2 *eggs*
½ *tsp. vanilla*

Scald milk and butter. Soak bread 5 to 10 minutes; add sugar, salt, slightly beaten eggs and vanilla. Stir until sugar dissolves. Cook in double boiler or set in a pan of hot water in oven. Bake at 375° F. until the tip of a knife inserted in the center comes out clean (1 hour).

*Variations:*

Add ½ c. finely cut dates, figs, stewed dried prunes or whole raisins to mixture.

Add ¼ c. shredded coconut to mixture and sprinkle ¼ c. over top in baking dish.

Use ⅓ c. brown sugar to replace white in pudding recipe.

Fold ½ c. jam or marmalade into pudding mixture before cooking.

Add ½ c. chopped nuts to pudding mixture with or without cocoa added.

Add ¼ c. cocoa and ¼ c. extra sugar to pudding recipe.

### Berry Pudding

Stew black currants, red currants or raspberries or any mixture of berries with sugar to taste.

Butter a mold or bowl; line with slices of bread 1 inch thick (crusts removed). Fill with hot stewed fruit. Cover with slices of bread. Cover with a saucer or small plate that fits down into the bowl and a weight. Be sure there is sufficient juice to completely soak the bread. Excess juice will rise over weight and can be poured off before unmolding. Place in a cool spot for 24 hours. Unmold and slice. Serve with whipped cream.

### Queen of Puddings

*Rind of large lemon*
2 *T. butter*
2 *egg yolks*
2 *egg whites*
1 *c. fine fresh crumbs*
1 *c. milk*
4 *T. sugar*
4 *T. jam*

Pour milk over crumbs. Soak 1 hour. Combine egg yolks, sugar, grated lemon rind and butter. Add to mixture. Bake 30 minutes until set. Spread a layer of jam over pudding. Make a meringue of egg whites. Cook until egg white is crisp.

### Mock Lady Fingers

½ *c. cocoa*
½ *c. sugar*
1 *c. water*
⅛ *tsp. salt*
2 *tsp. vanilla*
4 *1-inch slices bread*
*Shredded coconut*

Combine sugar, salt, cocoa and water in saucepan. Boil 5 minutes, stirring occasionally. Cool slightly; add vanilla. Cut bread into fingers about 1 by 1 by 3 inches; dip into chocolate sauce; allow to absorb sauce well; drain. Roll in finely shredded coconut. Brown in oven until coconut is light brown. Cool.

### Date Torte

¼ *c. dry bread crumbs*
⅛ *tsp. salt*
½ *tsp. baking powder*
1 *egg*
¼ *c. sugar*
¼ *tsp. vanilla*
1 *c. dates, sliced*
½ *c. nuts, chopped*

Mix crumbs, salt and baking powder. Beat the egg; beat in sugar; add vanilla, dates and nuts. Stir in crumb mixture. Spread in a layer about ¾ inch thick in a well-greased shallow pan. Bake in slow oven (325° F.) for 45 to 60 minutes. Cut in squares; serve warm or cold with whipped cream or vanilla ice cream.

### Apple Betty

2 *c. soft bread crumbs or cubes*
3 *c. sliced apples*
½ *c. sugar*
¼ *c. water*
¼ *tsp. cinnamon*
½ *tsp. nutmeg*
*Grated rind of ½ lemon*
1½ *T. lemon juice*
2 *T. melted butter*

Put one-third bread in bottom of buttered baking dish. Cover with half of each of sugar, apples, water, spices, grated lemon rind and lemon juice. Cover with one-third crumbs then remainder of fruit, water and flavorings. Mix rest of crumbs with the butter; sprinkle over pudding. Bake one hour in moderate oven. Serve warm with cream.

# Let's Have Rabbit

***Something different in the meat line for the family***

*by* HENRIETTA K. BUTLER

"IF you want to prepare a special treat and give the family something different in the meat line, try a rabbit dinner," said Aunt Nellie, as she lifted the lid of the large earthenware casserole.

"Rabbit!" I exclaimed, sniffing the delicious odors. "Why, I haven't tasted that for years and years! I always know I'm going to taste a really good old-fashioned meal when I come to your place for lunch, Auntie."

As she filled my plate, she said: "The old recipes can't be beaten, I believe, when it comes to cooking rabbit or hare. Mine are some given to me by my mother who used them in England. Try one the next time you need a change. It actually is much like chicken. Rabbit is light and easily digested. It must be cooked gently." Here are some of the recipes she gave me.

### Roast Rabbit

6 *T. bread crumbs*
3 *T. shortening*
1 *tsp. grated lemon rind*
3 *beaten eggs*
3 *T. chopped, cooked ham*
1 *T. chopped parsley*
½ *tsp. powdered herbs*
1 *rabbit*
*Salt and pepper*
*Red pepper*

Beat up eggs, add shortening, ham, bread crumbs, parsley and seasonings and mix well. Wipe rabbit and season inside with pepper, salt and powdered cloves. Lay stuffing inside rabbit and sew top. Skewer head back and legs on each side. Roast one hour basting well with melted fat. Serve hot with currant jelly.

### Stewed Rabbit

Stewed rabbit is much nicer if cooked in an earthenware dish or casserole, because it allows of slower cooking.

Pare and wash one carrot, one turnip, one large onion and a small head of celery. Cut them all up rather small. Tie together a bunch of savory herbs. After thoroughly washing the rabbit, cut it into joints, each piece having been wiped and rolled in seasoned flour. Put a layer of mixed vegetables in casserole, then a layer of meat. Repeat until materials are used up. On top place several strips of bacon and the bunch of herbs. Add a little more salt and pepper and sufficient water to cover the meat. Place lid on casserole and cook slowly for at least two and a half to three hours.

For variation from the ordinary stewed rabbit, try cooking slowly in a broth made from cooked meat. Thicken this and flavor with curry powder, onions or other vegetables and a dash of vinegar. Serve with boiled rice in a separate dish.

### Rabbit Pie

1 *rabbit*
½ *lb. pickled pork*
½ *c. minced onion*
1 *c. minced celery*
*Salt and pepper*
2 *T. dripping*
*Boiling meat stock*

Dress rabbit and cut in suitable serving pieces, sprinkle with seasonings and roll in flour. Melt dripping in frying pan, add onion and celery and brown the meat. In casserole cover meat with boiling stock, season again, put on lid, cook in oven for 1½ hours (375°F). Remove from oven, cover with small baking-powder biscuits, made from a good short mixture. Bake again 15 minutes in oven 450°F. Serve hot.

### Rabbit Rissoles

Take finely minced cooked rabbit and a little minced ham. Some pepper and salt, to season, and mix all these ingredients into a thick, white sauce. Spread on a plate until quite cold. Divide the mixture into equal quantities and roll into round shapes. Dip these rissoles in beaten egg and bread crumbs, then fry to a golden brown.

# Cooking Game

***A word as to good methods of handling and cooking***

*by* EFFIE BUTLER

FROM the opening day of the season on—many a hunter comes home with the bag limit. The following methods of handling and cooking wild game may help you in the preparation of these gifts from our woods, field and streams.

All water fowl should be cooked as fresh as possible as their flesh is oily and will taint quickly. Wild ducks and geese should be washed in warm water and soap or baking soda before being drawn as anything less effectual will not cleanse the oil from their skin. The wild flavor that some people dislike comes from the oil in the skin but there are various ways of overcoming this. Placing the birds in salt water for ten to 12 hours or in a bath of baking soda, three teaspoons to a quart, for two or three hours. Stuffing game birds with sliced onion or apple helps to remove the strong flavor. These are not eaten. Wild ducks may be skinned, then covered with butter, dredged thickly with flour, and put in a hot oven to roast.

If game birds become slightly tainted they may be sweetened by soaking in a pan of milk after being plucked, washed, and drawn. Keep them entirely covered with milk for 24 hours and then cook immediately.

To ease the task of plucking wild ducks first remove the large body feathers. Then melt paraffin wax in a small, deep pan. Roll the duck in this paraffin. When cool, remove the paraffin by scraping. In most instances the pin-feathers will be so well removed that no singeing is necessary. The paraffin may be used over and over again.

If you enjoy the wild flavor, do not soak the bird. A well-washed, chilled bird is ready to be stuffed and roasted. The general rule is that while dark-meated game such as ducks may be rare, white-meated game, pheasant, prairie chicken, should be well done. Young game cooks more quickly than poultry of the same size and the flavor is best retained by cooking it plainly. Old birds will keep longer than young ones. Old birds also need longer cooking.

Try this variation for roast wild duck. Rub bird inside and out with two tablespoons ground ginger, salt and pepper. Stuff with bread or apple dressing. Peel a large onion and into this stick six cloves and place on the

duck. Place in roaster and add one cup of water. Roast, basting often.

Brown a stuffed pheasant in hot oven, basting frequently with bacon fat. When sufficiently brown, place bird in parchment bag and continue baking, breast down, in a slow oven. This will preserve the characteristic flavor and aroma of roasted birds but the meat will be tender and moist. Remove pheasant from bag just before it is served.

Disjoint dressed pheasant and place the pieces in a casserole. Cover with a mixture of one cup of ground bread crumbs and one cup finely chopped celery. Add one cup of sour cream; cover and bake until tender. The acid in the sour cream tenderizes the meat.

Deer meat is more flavorsome if allowed to hang a week or two before being used. Since venison is inclined to be dry, lay a large piece of suet on top of the meat when roasting. Roast a piece of pork with the venison; they are a good combination. Add a few bay leaves or sprinkle sage over a venison roast to lessen the wild flavor.

Make venison sausage of the less tender cuts. Grind together about five pounds lean venison and two pounds fat salt pork. Add four teaspoons sage, salt and pepper to taste, a chopped onion and juice of one lemon. Form into cakes and fry as country sausage.

# Salty Pointers

***Prankster on the kitchen shelf***

*by* HELEN HUNT

THERE'S hardly a thing you cook which isn't improved by the addition of a little salt. Omit it from your porridge or potatoes just once and see how long it takes to live it down. The flat, insipid results will spark many a sly jest or subtle reminder for weeks to come. Salt is indeed the friend of the cook but it can be an unreliable one if improperly used. A delicate touch is required, a sure and deft timing, if salt is to be your friend.

That curdled custard or gritty fudge may rightly glance suspiciously at salt sitting so smugly on the shelf. In the case of fudge a finer-grained, much superior product results if you reserve the salt, called for in the recipe, till you take the fudge from the fire. Add just before beating. Salt added to any mixture containing milk, which is to be cooked, has a tendency to curdle it. The remedy—wait till you have removed it from the stove before adding the salt. Add it to the boiled custard and cooked salad dressing while they are still piping hot. Of course one has to add it to baked custard before cooking but use very sparingly—just a few grains.

Ice cream, the delicious dessert that has become a national favorite, owes its very existence to salt. Salt, sandwiched between layers of ice, is the magic agent which transforms the healthful mixture of eggs, milk, sugar and flavoring into this acceptable form.

Salt comes into its own when it meets up with meat, especially in the curing processes. However, in cooking fresh meat, it is better to wait till the meat is partially cooked before adding the salt. It has a tendency to draw out the juices and toughen the fibres. Fowl, especially wild ones, which are often improperly bled, are improved by

(*Please turn to page* 84)

# Exercise and Relaxation

***Posture and carriage are improved by simple exercises while relaxation helps overcome effects of fatigue***

*by* **LORETTA MILLER**

CORRECT exercises, directed to the most common figure-fault, takes inches off the abdomen and waistline, stretches the torso, improves the carriage, makes the shoulders straighter and greatly improves the general appearance. Proper relaxation at the right time returns the sparkle to the eyes, also helps straighten the shoulders, improves the posture and carriage and gives the whole body a more youthful appearance.

Regardless of one's figure-faults, almost every girl's or woman's appearance is greatly improved by a slender torso. Good posture is not always due to a nice figure, but every figure is improved by good posture. Before starting any exercise routine, it is well to check one's posture, both while standing erect and while walking. If there is the slightest chance that it detracts from one's general appearance, it's well to follow through with a few daily exercises. One of the simplest and most effective exercises is one that is practiced by many famous beauties.

Use any straight broom handle or a stick at least three feet long and about the same weight as the handle of a broom and, grasping it firmly at each end, raise and lower it . . . first as high then as low as you can stretch your body without bending forward. Repeat this at least ten times. Then raise the wand and bending forward, while keeping the knees straight, lower the hands toward the floor. It isn't too important whether or not the floor is touched. The important thing is to bend at the waistline without bending the knees. Repeat this exercise ten times.

Now, still holding firmly to each end of the wand, take a deep breath, stretch through the middle and at the same time turn to the right while raising the wand straight up over the right shoulder. Return the wand to original position, take another deep breath and stretch while you raise the wand straight up over your left shoulder. Repeat this at least five times over each shoulder. Gradually increase this number to ten or 15 times over each shoulder. To complete the wand routine, raise the arms up and slowly bring them down just back of the head. Repeat this ten times.

The wand routine, repeated every day, will do much to keep the average figure under control, will improve the slightly heavy waistline and abdomen; it certainly will improve the posture and most important of all, it will give one a "feeling" of slenderness that will, in turn, make one walk like a queen.

Natural exercises such as walking, skating, swimming and, in fact almost every active sport, are natural conditioners for keeping the hips, waistline and legs in good proportion. When sufficient exercise is not taken, the muscles become flabby and the body loses its shapliness. Here is an exercise designed to help firm the muscles as an aid toward slenderizing the body below the waist.

Stand erect as you hold fast to the back of a chair. Then while stretching the torso to make you tall, kick your right leg forward as high as you can. Then without touching the floor, swing the leg back as far and as high as possible. Repeat five times forward and the same number of times backward with each leg. Gradually increase this number to ten, then to 20 and finally to 25 each day. As you do this exercise notice that the abdominal muscles are gently exercised. This simple routine, practiced twice each day, preferably morning and evening, is sufficient to keep the entire body in fine condition and will certainly prevent the accumulation of surplus fat.

Doing the family housework can bring rich rewards if a little thought is given to the movements of the body. For instance, making the beds and dusting can improve the figure if the shoulders are kept erect and all the bending is done at the waistline. Sweeping the floor and washing dishes will give the upper portion of the body its share of exercise if the torso is stretched and the body raised to its full height while performing these simple tasks.

It is just as important to know when to relax as it is to know how to exercise. Taking a short rest period before complete exhaustion overtakes one gives strength to carry on with more enthusiasm and helps prevent a tired facial expression and a slumped figure.

Both a mid-morning and a mid-afternoon rest should be taken whenever possible. It isn't always easy to take time out, but there may be days when it can be done. Get the most from your all too few minutes. Lie flat on your bed, with no pillow under your head but with legs and feet raised at a 45-degree angle. Use pillows under the lower portion of your body in order to have your shoulders and head lower than your waistline and lower body. In this position simply close your eyes and relax for five to 20 minutes.

THEN brush and comb your hair and wash your face with cool water, and notice how greatly refreshed you are. If you find it impossible to lie down during the day, you can get relaxation from a few minutes of correct sitting. Any chair may be used, either a hard or soft cushion, bring the hips back as far as possible on the chair seat and with hands folded in the lap let your head drop forward. Relax in this position for a few minutes. Then tilt your chair for the remainder of your rest period.

If you've been going a fast pace all day and you still have to get in a short rest before evening, sponge over the entire body with a solution of salt water after a brief rest period. First lie flat on your back or either side, without a pillow under your head. Then with a solution of about two quarts of water into which ½ cup of common salt has been dissolved, sponge over the entire body. Use a coarse-textured washcloth and rub rather vigorously, letting the final deposit of salt dry naturally on the skin.

## *Salty Pointers*

*Continued from page 82*

soaking in salt water before cooking.

We can hardly think of meat without being reminded of pickles and relishes and here again salt is indispensable. The real secret in the making of good pickles is in the brining. Once vegetables are properly brined you can add any one of many sauces and the results will be delicious, crisp and appetizing. Muff the brining process and your pickles are doomed to failure no matter what fancy sauce you contrive.

IN preserving fruits, salt has its place, too. Apples, pears and peaches dropped into a weak brine do not turn brown while waiting their turn in the canner. A pinch of salt added to rhubarb or applesauce cuts down the amount of sugar required. Fruit pies benefit by its addition, too.

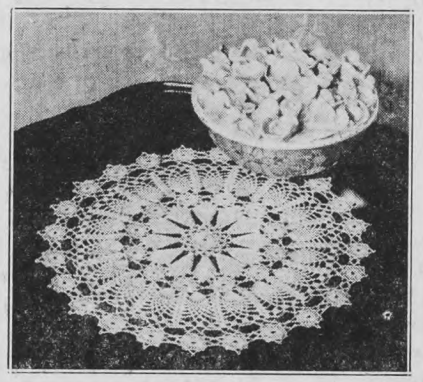
Your bread or buns are heavy and unappetizing? Salt may be the gremlin gumming up the works. You can't make bread without it but you must use it with care. Salt slows down the action of the yeast. It is best to set a foundation sponge without salt and then when this becomes light add the salt and other ingredients. This gives the yeast a chance to liven up and gain strength before it meets up with the restraining influence of the salt. Even then salt should be carefully measured and only the amount called for in the recipe added.

Salt is a help, too, in emergencies. When something boils over on the stove or in the oven a generous application of salt will cut down the odor and smoke. Your iron needs cleaning? Sprinkle salt over a newspaper and rub the warm iron over the salt till it is clean and bright again.

If you would gain repute as a cook salt must be your friend. Study its every mood. Your reward will be great. Neglect it and oh my! Beware the pranks it will play on you—curdled custard gritty fudge, tough meat, soft pickles and heavy bread! Friend or foe—salt is how you use it.

## *Dainty Centerpiece*

***Pineapple and filigree design***



**Design No. C-335.**

This is an unusual combination of stitches and results in one of the daintiest centerpieces we have seen in a long while. The outer edge is a simulated Irish crochet design; then comes the usual pineapple motif while in the center you have the single-crochet filigree pattern. We know you will find it fascinating to make and will enjoy using the piece. If preferred the circles in the center section and along the outer edge can be made of a different color. Pattern No. C-335, price 25 cents.

# First Fall Fashions


No. 8377—A softly flattering one-piece dress with spic-and-span detachable collar and cuffs. The self collar with small lapels is made in one with the dress front; the sleeves may be short or below-elbow length. The skirt has slenderizing tucks at center front; a three-gore back. Sizes 12, 14, 16, 18 and 20 years; 40 and 42-inch bust. Size 18 requires 4¾ yards 39-inch fabric, 1¼ yards contrast for detachable collar and cuffs. Price 50 cents.

No. 3677—For the fashion-minded teen-ager, a jumper and blouse. The blouse has cuffed short or below-the-elbow sleeves, a small, flat collar which fastens with one button at the neck back. Trim the full skirt with big pretty pockets or the bodice with colorful ribbon tabs. Sizes 10, 12, 14 and 16 years. Size 12 requires 1¾ yards 35-inch for blouse; 3¼ yards 39-inch fabric for jumper. Price 25 cents.

No. 2962—A weskit styled to wear with extra skirts or with a suit. There are pockets to set in at the waistline or you may want to add a half belt at the back. Jacket pattern included. Sizes 12, 14, 16, 18 and 20 years. Size 16 requires 1½ yards 35-inch fabric or 1⅛ yards 54-inch. Price 25 cents.

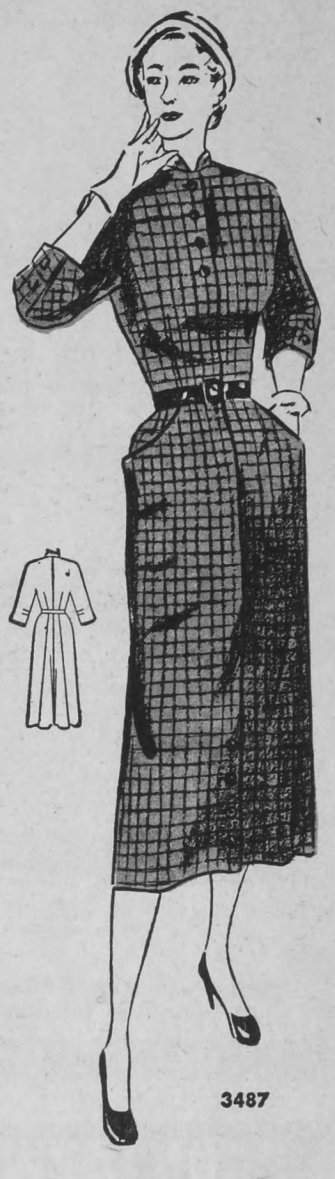
No. 3487 — Button-trimmed junior and misses one-piece dress with three-quarter dolman sleeves and a small mandarin collar. Hip pockets give a peg-top look; there's a low flare at the skirt back. Detachable collar and cuffs included in pattern. Sizes 11, 12, 13, 14, 15, 16 and 18 years. Size 15 requires 4 yards 35-inch or 2¾ yards 54-inch fabric. Price 35 cents.

No. 8421 — A youthfully styled junior dress and short jacket. The dress is sleeveless with a six-gore skirt that flares from a tiny waist. The fitted jacket comes just to the last rib; has short or three-quarter set-in sleeves and a V-neck to show off the pretty neckline of the dress. Sizes 11, 12, 13, 14, 15, 16 and 18 years. Size 14 requires for style 1 dress and jacket 5¼ yards 39-inch fabric or 3½ yards 54-inch; ⅜ yard contrasting for dickey. Price 50 cents.

**State correct size and number of pattern wanted.**

**Note price.**

**Write name and address clearly.**







## Simplicity Patterns

**made in Canada, may be obtained from your local dealer or from The Country Guide Pattern Service, Winnipeg, Manitoba.**

# Crafts for Fall

***Supply interest and occupation***

*by* **FLORENCE WEBB**

**Design No. H-104.**

## Shell Owl Lamp

The newest in Shellcraft. Original and beautiful. In ten easy steps, all ages from 15 to 50 can make this amusing novelty from sea shells, supplied complete in kit form. The wise old owl has eyes that light up electrically. We send you complete instructions, special colored shells, glue, cord and bulb. Price $3.50 postpaid.

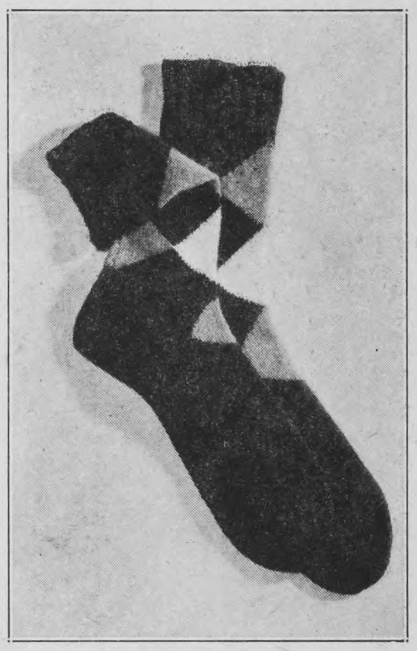
## Diamond Socks

***Two ways to knit popular items***

It doesn't matter how many pairs of socks we design . . . the diamond is still the most popular one with the men folk. This pattern includes two ways to make diamonds—the one where the stitches are picked up along the edge of each diamond, and the diamond completed in one color before a second diamond is started. The second set of instructions is for making the socks by carrying all the colors along at one time.

Pattern is No. K-100, price 25 cents.

**Design No. K-100.**



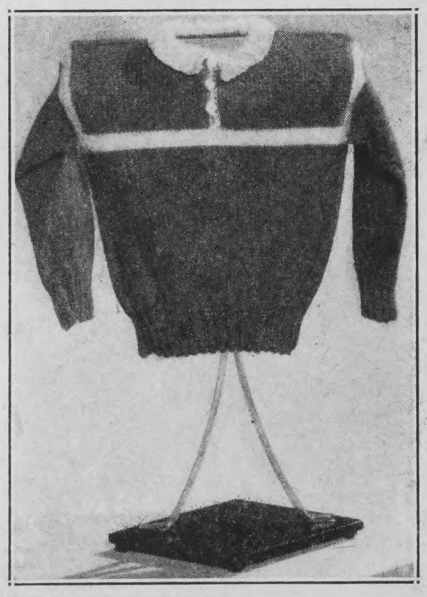
**Design No. K-100.**

Address orders to Needlework Department, The Country Guide, Winnipeg, Man.

## A Pullover

**For a Boy or a Girl**

We made this pullover in red and white, using three-ply yarn and No. 12 needles. It made up beautifully and we know you will like it for either a boy or a girl. The collar may be omitted and a straight ribbed band added to the neckline if you think the collar a bit fussy for a boy. Raglan sleeves and the squared off yoke are style interests. Small pearl buttons finish the open-front neckline. Pattern includes sizes 2, 4, 6 years, No. K-168, price 25 cents. Size 2 requires three one-ounce balls of three-ply yarn, plus one extra for contrast which you may order through the department at 42 cents per ball, postage paid. Needles are 20 cents per pair. Be sure to state size and give color required when ordering.



**Design No. K-168.**

# The Price of Soap

***Items that enter into the cost of detergents***

*by* **MARGARET M. SPEECHLY**

UNDER pioneer conditions, soap was manufactured at tremendous cost in terms of human effort. First, animals had to be raised in order to secure the fat. Then came the butchering and the tedious job of rendering fat over a hot fire.

To obtain the lye for combining with the fat it was necessary to leach ashes laboriously. Even when lye could be bought in cans, the job of soapmaking took a great deal of time, energy and skill. Nobody ever thougnt of putting a price on the product, because there was no alternative to making your own soap.

Nowadays homemakers are greatly exercised over the persistent rise in the cost of keeping clean. It is caused by changes that have been occurring the world over in the last few decades. Instead of being produced in the kitchen, the manufacture of soap has been transferred to distant factories.

The raw materials from which soap is made are harder to secure and have risen in price. Fats being a by-product of the livestock industry, are affected by the price of animals.

The demand is now for smaller carcasses instead of large beef-animals and lard-type hogs, and the change-over has meant a decrease in fat supplies. The shortages have been aggravated by the destruction of animals and the devastation of oil plantations that have occurred during two huge wars.

At the same time, the demand for soap has increased by leaps and bounds. In contrast to the isolated settlements of pioneer times, millions of people now live in densely populated areas with no means of producing the raw materials that go into soap.

The world over, populations have increased with great rapidity and standards of cleanliness have risen too. Hence a tremendous increase in the demand for soap.

Further, large populations mean that more fat is needed for food which in turn affects the price of waste fats required for soapmaking. Oils are used in the production of margarine. The price of fats, oils and alkalis is now an international matter, with one country bidding against each other for supplies.

The enormous demand for soaps has led manufacturers to develop new products made from chemicals. These are the synthetic detergents that have appeared on the market in recent years. They are referred to by the trade as "syndets."

Everybody knows they are excellent for use in hard water areas and for cleansing woollens, silks and rayons. Experts estimate that syndets get half the market in hard water regions and one-tenth of the market in soft water areas. This has eased the general shortage, but has not stopped the rise in the cost of keeping clean.

The price of syndets is also governed by world demand for the chemicals used in their production. When there is a world shortage of phosphates, benzene, chlorine or other ingredients this is reflected in the cost of all detergents. Manufacturers change their formulas from time to time as shortages develop.

Raw materials for soaps and syndets must be brought long distances by ocean or rail before they reach the factories. Not only must transportation be paid for, but also the labor for loading and unloading. These rates are governed by unions. Strikes can easily tie up raw materials.

The actual manufacture of raw materials is largely done by machinery, but this equipment is very expensive. Scientists and technical experts are essential in industry but are costly.

Packaging is another item. Each time the price of pulpwood goes up, it is reflected in the cost of containers. Printing of the labels is done by highly skilled workers.

Add to all this the tremendous sums set aside for advertising, radio programs and sales promotions, as well as the freight rates and handling charges. After leaving the factory, the finished product passes through wholesalers, jobbers and retailers, each of whom must have his handling costs and margins of profit.

All these agencies claim that the amount of profit on a package of soap or syndet is very small. It is the tremendous turnover that makes it worth while.

IN the face of all this you may feel there is no chance for individuals to keep down the cost of keeping clean. You have no control over world shortages or the complicated system of marketing that exists today, but you do control the use of whatever you buy.

First, decide what product is the best for the job at hand. It pays to invest in more than one type of detergent (remember, anything that cleans is a detergent) depending on the kind of soil to be removed. Each family has different problems due to the water supply, the fabrics to be washed, and the amount and kind of dirt.

Your costs will be too high if you fail to determine what product is the best buy, or if you fall for coupon-bearing brands which do not give you the most value.

Use your purchase carefully. Never dump it straight into the dishpan or the machine. Measure the water, add a small amount of the product and put in more only if necessary. This will save money week by week, you will not need to use so much hand lotion and may even avoid a visit to the doctor about skin irritation.

One dump out of the small hole in a package may be as much as five teaspoons. If you only need one teaspoon for a gallon of water why use five? If you tear back the top, you may dump out as much as 14 teaspoons! Your purchases will last five times longer, or 14 times longer if you use them economically.

Check your water supply for hardness and you will make further savings. Soap will soften water if you add enough but washing soda or tri-sodium-phosphate (called tsp) are much cheaper. Send a sample of your water to the provincial department of health for analysis. When you know the degree of hardness you can determine how much softener to use.

# The White Swan

*Continued from page 12*

from the box in the corner. When he did not speak, she came to him, and putting her hands on the lapels of his jacket said gently, "Let him go, just this once, to see his white swan."

He shuffled his feet. When he was alone with her, his anger could not last, and though his voice was gruff, a grin was breaking upon his lips. "Oh, all right! Sure sounds like a lecture. I guess those cows will think I've been away visiting the Strembitskys, myself." Chuckling, he opened the door, and went out.

RONNIE was so quiet in his bed when Mary went to him that she thought he had fallen asleep, but when she leaned over him, his blue eyes smiled up at her. She sat by his side.

"You came just in time, Mother," he said, raising himself upon his pillow.

"In time for what, Ronnie?"

"To come into my story."

"How nice, Ronnie, and was I to be the wicked old queen tonight?"

"Oh, no! You were the fairy godmother. You touched my white swan with your wand, and made it all better. Then Olga and me rode on its back to visit her cousins 'way over the sea."

"And did you have a nice time?"

"They gave us seed cake, and yellow corn for our swan. They wanted us to stay, but we had to come back at 12 o'clock because the fairy godmother said so."

"And here I am to see that you did," she laughed, and bent to kiss him.

"Why doesn't Daddy like the Strembitskys?" he asked, his eyes suddenly serious.

"It isn't that he doesn't like them, dear. It's because he doesn't know them."

"I know Mr. Strembitsky," he returned. "He said, 'Hullo, Ronnie. How are you?' And I know Olga's mother, too. She gave me and Olga some seed cake today. Do you mind, Mother, if I had some seed cake?"

"No, Ronnie. I'm sure Mrs. Strembitsky knows how much seed cake is good for little boys."

His eyes grew misty. "Won't Daddy ever let me go to see my white swan?"

"Yes, dear. He said you might go tomorrow."

"Oh!" Joy and relief flooded his voice. His fairy godmother had become a reality. Later, in his prayers, he said, " . . . and please help Olga's mother make the white swan better," and his mother hoped in her heart that his prayer was answered soon.

The following morning Bob left with a truck load of grain for the elevator. He had prophesied, "A dawn with salmon-pink clouds in late September ain't a good sign. There's


going to be a storm within 48 hours, and I don't want to be caught with grain to haul over muddy roads." He expected to be away all night as he intended driving on to his uncle's farm. Mary was not perturbed by the prospect of a night alone, and after seeing Ronnie go whooping across the field to visit Olga, she turned cheerfully to work.

By noon the kitchen was spotless, and the air was filled with the aroma of crisp, golden buns she had baked. Ronnie loved them, and as he had promised to bring back his white swan for her to see, she felt the occasion merited a special treat.

She went to the window to look for him, but he was nowhere in sight. He should have been back an hour ago. She could not see the Strembitsky place nor the slough beyond the poplar windbreak at the far end of the pasture. A strange uneasiness, an intuitive feeling of misfortune, nagged her. She tried to explain to herself that nothing more than the tangled mass of clouds overspreading the western horizon caused her pulse to race, or the freshening wind with its omen of a storm. She set the table, and placed the chairs while she listened for his step at the door.

There was a step, but not his. Loud, imperative banging sent her running to the door, and there was Mr. Strembitsky with a dripping bundle in his arms. He did not speak, but his sunbrowned face was lined with anxiety, and he strode quickly into the kitchen.

"Ronnie!" His name burst from her lips as Mr. Strembitsky laid him upon the couch. She ran to him, held him close to her. His blue lips moved slightly as he tried to speak. She pulled away the blanket which was about his sodden form, and removed his wet clothes. She must bring warmth back into his numbed body. "Hurry! Hurry!" her pulse seemed to pound.

Mr. Strembitsky pushed wood into the stove, and drew the kettle over the flames. He talked rapidly as he worked. "Ronnie, he fall in the water. Olga, she run home. I grab a blanket, and run back. I'm sorry, Mrs. Mark." He retreated to the door, to stand there twisting his cap in his big hands. Water oozed from his shoes to form little puddles upon the door mat. His dark eyes were filled with concern.

"You've been kind," she managed to say. She heaped covers over Ronnie's shivering body. "Why were they on the slough again?"

"The swan got away, and they were catching it." He prepared to leave. "I hope Ronnie's better soon. He is nice friend for Olga."

She thanked him, and assured him that Ronnie would soon be well again, but in her own mind she was afraid.

All afternoon she worked to coax warmth into his body. At times she almost despaired, but with vigor born of anxiety, she redoubled her ministrations. Gradually his shivers grew less frequent, and his teeth ceased their chattering. There was no brandy in the house, but the hot bovril which she managed to pass between his teeth brought a slight glow to his cheeks, and a smile to his lips. "If Bob were only here," she murmured. Toward evening he fell into a restless sleep, but his shallow breathing and flushed face brought new qualms for his mother.

That night the wind howled in its fury. Rain tore at the windows and churned the road to mire. Cars would bog down for days. All night the storm raged, and all night Mary sat with Ronnie. His temperature was rising, and the pain in his chest kept him awake. His mother feared that he was very near pneumonia.

OLGA and her mother came early the following morning. Olga, a tall and dark-haired child with wide intelligent eyes announced, "We came to see Ronnie." Her mother smiled, and Mary found comfort in that smile. There was strength in the woman's hands, gentleness in her warm brown eyes. Mary, looking at them, felt that Ronnie could have no surer help than hers. She welcomed them in, and hung their wraps to dry.

"The little boy?" Mrs. Strembitsky asked the question with tutored preciseness, and Olga smiled with relief and pride.

"It's pneumonia, I'm afraid," Mary answered with fatigue in her voice. "The water must've been like ice."

Olga spoke rapidly to her mother in their own tongue. Mrs. Strembitsky replied briefly, and Olga interpreted with ease. "Can we see him, Mrs. Mark? Mother worked in a hospital when she was a girl, and she wants to help. We saw your light last night."


***Sure Catch.***

Mary smiled her gratitude, and led them to Ronnie's couch where he lay in restless sleep. Mrs. Strembitsky placed her hand on his forehead, listened to his breathing. Then she looked up at Mary. No language could convey the message of sympathetic understanding that flashed between the two women.

"Olga!" The girl's mother spoke in low, rapid tones. The child sensed the imperative need for haste, and with a glance of commiseration for Ronnie, she pulled on her coat, and hurried away.

They carried Ronnie to his room. With quiet efficiency Mrs. Strembitsky prepared mustard poultices for his chest, and hot drinks of bovril; while Mary, inspired with fresh courage, allayed his pain with her hands.

Evening came. Mary, standing at his window, looked out upon the wind-driven rain, and felt her strength ebb with each laboring breath he drew. She wished with all her heart that Bob could know how much they needed him now.

A tramping of horses; voices at the kitchen door. Then Mrs. Strembitsky calling from the stair, "Your man!"

Mary's heart skipped a beat as Bob came hurrying into the house. He clasped her hand in his, and whispered reassuringly. He said, "Mike Strembitsky got us through. Doctor Laurie is here." Together they went to Ronnie's bed.

Before Bob and the doctor came downstairs, Mrs. Strembitsky had wiped their muddy foot prints from the kitchen linoleum, and had warm water in the wash bowl for Doctor Laurie. When her husband came in after caring for his horses, she served hot coffee.

Doctor Laurie was short, stout and hearty. Though he always gave the impression of having just awakened from a nap, his mind was as sharp as a scalpel. He neglected himself for his patients. His grey hair was tousled, his tweeds baggy. He was saying, "The wee laddie's fair set for pneumonia—but don't you worry—he's going to be all right. Not that I'm here too soon, mind ye—thanks to Mike." He drank gratefully from his coffee cup while his blue eyes twinkled over the rim at Mrs. Strembitsky. "That wife of yours, Mike, is a fine nurse. You'll be losin' her, for I need one in my office."

*"Sure the O'Gradys have a lot of things. His wife works!"*

The raillery brought smiles all around. Mike interpreted for his wife who blushed and averted her eyes. "She don't speak much," he explained, "but she smile a lot."

"Pity more women didn't do likewise," commented the doctor drily. He turned to Bob. "This white swan the laddie raves about. Is it a toy or the like? If he could have it, I feel he would get well the faster."

Bob explained about the white swan.

"Ah well, it can't be helped if it be away now, but it means somethin' to the lad."

Mary came down to thank the Strembitskys before they left. Doctor Laurie advised quietly, "Have your wife get some rest, Bob, I'll watch the laddie tonight."

In the early morning Mary tiptoed to Ronnie's bed. He was sleeping quietly. Gently she brushed her lips across his curly hair as she whispered, "Thank God, they came in time."

Doctor Laurie was asleep upon the kitchen couch. His pipe lay beside him where it had fallen from his hand, and she picked it up. The bowl was still warm, and she smiled her gratitude, knowing that his vigil had been long. Of Bob there was no sign.

It was noon when he came in, and under his arm he carried the white swan. "You found it, Bob!" Mary felt like singing. He put his arm around her. The other held the swan. She laughed with him with tears in her eyes. "Ronnie will think you're Aladdin's genii of the lamp. You'll be his hero forever."

Bob said with unusual seriousness, "I think I've found more than the swan, Mary. This morning when I went to the slough, Mike was already there."

"Mike?"

"Sure. Mike Strembitsky. We looked for it together."

# The Worms' Good Turn

***The lowly earthworm plays an important part in renewing the world's crop-bearing soils***

*by* **NIGEL BRAMLEY**

A WORM, lying shrivelled and stranded on the road, or turned up by your fork in the garden, seems a helpless, insignificant enough creature. Yet without him and his kin, human civilization would not only be the poorer, it would be impossible.

Earthworms are nature's own cultivators of the soil. Nothing lush can grow on rock or chalk or gravel; there must be a fertile topsoil for the world's crops to grow in. By their ceaseless boring and tunnelling, earthworms make and renew that vital topsoil. They keep it friable, transform animal and vegetable waste, particularly dead leaves and plants, into rich humus. They turn natural minerals into soluble plant food. They break up and aerate the earth, allowing water to drain through. In short, they are the first husbandmen, and still the most important.

In a world that is speedily losing its soil fertility through overcropping, mismanagement and erosion, it is time to take stock again of the worm's true value. Kill off your worms, and your soil will lack constantly renewed fertility. Encourage and preserve them, and your crops will remain satisfactory.

From Aristotle to Darwin, and again in the present day, men have appreciated the humble earthworm's place in the scheme of things, but never fully enough. The member of a wide and varied family of primitive creatures, your average earthworm, although he may vary in size in different parts of the world, is mostly a long stomach and rings of rippling muscle. A simply constructed creature, he consists of from 100 to 200 muscular rings, or segments, which extend from the elongated head without eyes, nose or ears, to the tapering tail. By means of tiny clusters of erectile bristles set at intervals along the whole length of his body, and a self-secreted slimy mucous for lubrication purposes, the earthworm is able to burrow through the soil. The bristles grip at one end while the other is pulled along, and the whole movement is rippling rather than snake-like.

Cut a hapless worm in two with your spade and the front end will be able to grow a new tail, but never vice versa. By means of a long overhanging lip over its wide mouth—its most important organ, apart from its stomach – the worm is able to push some of the earth aside as it tunnels. The rest it swallows greedily, passing it into a bird-like crop in the neck, where minute fragments of grit grind everything down into a fine paste. Then the soil is swiftly digested in the long thread-like stomach, the worm taking its own nourishment from the soil. Leaves and rotting vegetation are actually pulled down from the surface, moistened with a kind of saliva, and eaten in the same way.

The remaining soil, now very finely ground, is deposited on the surface in the form of the familiar "worm-casts" which are the bane of tidy gardeners, bowling-green attendants and golfers. But these casts consist of pulverized, predigested soil which happens to be the richest in the world for growing anything in. Scientific tests show that it contains five times as much nitrate, seven times as much phosphorus, 11 times as much potash, three times the magnesium content and up to 50 per cent more natural humus than ordinary soil. It's worth growing a few seedlings in worm-cast soil just to prove its richness.

And as the myriads of worms in the world, never resting or hibernating, digging deep in dry weather and nearer the top in wet, constantly produce this layer of cast soil, no wonder the earth has been fertile for thousands of years. The sweetness of the Nile Valley, for so long the home of a civilization, is owed to the hordes of hungry worms that wait each year for the huge flood of waste vegetable matter the river brings down at floodtime. The same is true of fertile areas all over the globe. Starting long before the advent of man on the earth, the lowly worm still tunnels, burrows and transforms in its primeval but vital way.

Whereas a plow rarely penetrates more than a foot down, the worms keeping up their good work go down to a depth of four feet and more. It is probably true to say that all natural vegetation owes its luxuriousness to the unseen armies of earthworms at work beneath it. Each year ten tons of soil per acre is shifted to the surface more thoroughly than any spade or plow did it. All vegetation is systematically buried to rot, stones are hauled down to form natural drainage and in five undisturbed years, worms will put an extra inch depth on the surface—an inch of the richest soil there is.

FIGURES may mean little or nothing, but for what they are worth, in England alone earthworms "process" something like 320,000,000 tons of soil a year. Darwin estimated that arable land carries an average of 53,000 worms to the acre, but more recent researches at Rothamsted have shown his estimates to be unduly conservative. Even poor soil, it has been found, supports half a million on each acre, and really good farmland may have up to 1,750,000.

Pioneer of this awakened interest in earthworms is an American expert, Dr. Thomas J. Barrett, who has already built up a wide connection supplying worms reared in garden pens on rubbish and decaying vegetation. He first discovered the value of harnessing the earthworm years ago from an old peasant in France, and has grown stupendous food crops from a single acre spread with worm soil. "What we need is more topsoil," he says, "not more acres." And he has transformed (or rather his earthworms have) a rocky, dry hillside acre in California into a fruit and tree-filled paradise to prove it.

It would be remarkable if man finally recognized the earthworm's immense importance by working with him, cultivating him instead of the soil, and relying on nature to do the rest. Remarkable, but by no means impossible.

# Unsuspected Fire Hazards

***The records of insurance companies disclose many fires caused in most incredible ways***

*by* W. O. MURPHY

CARELESS cigarette smokers are believed to cause most fires, but quite a few have been caused by the craziest incidents.

The Clyde experienced one of its biggest fires when two boys were filling drums with naphtha. One of the boys hopped from a packing-case onto the concrete floor and a spark from his hob-nailed boots ignited the spirit. His hop cost the firm a small fortune.

A similar accident once alarmed the citizens of Ripon, in the American midwest. A runaway horse broke a pipeline and the sparks from its flying shoes set fire to the escaping oil. It took firemen over three hours to get the blaze under control.

Recently a tray of pastries set fire to a house. It happened when the tray fell from a kitchen shelf onto a tap handle and turned on the water. The pastries spilled out and clogged the drain. The sink overflowed, the water seeped through the floor, a short circuit followed and fire broke out.

Few would imagine that thirst could be much of a fire-raiser, but that was the case in prewar Vienna. The inhabitants were puzzled over the frequency of inexplicable outbreaks of fires. Eventually, however, they found that the fire-lighter was really a fire-fighter who, deeply appreciative of the Austrian custom of providing free beer for firemen, engineered some two dozen binges before he was caught!

Again, rain was actually the cause of a fire in an asphalt plant near Toronto. Rain water leaked into a barrel of asphalt and when the barrel was subsequently heated the boiling water splashed asphalt into the fire and set it alight.

Animals often cause fires. Squirrels nesting in the attic of a house are known to have gnawed the insulation from electric cables, causing a short circuit. One blaze caused in this way spread to destroy 25 houses.

On another occasion a nest-building sparrow snatched a length of string from a bonfire. One end of the string was still glowing. It was then carried by the bird beneath the eaves of a house and the roof caught alight.

When several houses in Morocco caught fire some years ago, it was found that a broken glass bottle was the culprit. The sun's rays had been focussed on wood paving blocks through the glass and they began to smoulder. These in turn ignited nearby rubbish and set the house ablaze.

When a youth lit his cigarette by striking a match on an electric light bulb, a palm leaf took fire. And so began the terrible conflagration that destroyed the famous Boston dance garden, the Cocoanut Grove, a few years ago.

Fires also start in the craziest places. One married couple suddenly threw back their bedclothes when the mattress began to get quite warm. After several minutes the mattress became so hot that they had to jump out. Apparently the stuffing, previously contaminated by cotton-seed oil, had, through spontaneous combustion, burst into flames.

There was a similar case when a fire broke out within 30 minutes after a painter had hung his paint-stained overalls in a clothes closet.

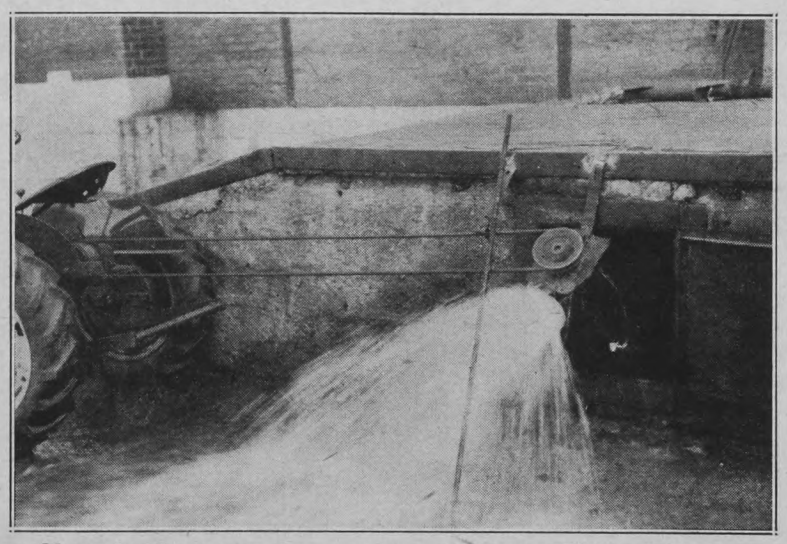
When another man, leaving his office, put on his coat, his clothes burst into flames. It was found that some potassium chlorate throat tablets which he carried loose in his pocket had rubbed against a safety-match box and become ignited.

But perhaps one of the strangest causes of fire recorded occurred when a man in a foundry leaned over a mold of liquid iron. He had been working hard and a drop of sweat from his brow fell into the metal. The ensuing explosion wrecked most of the molding shop and the whole foundry became a burning mass.

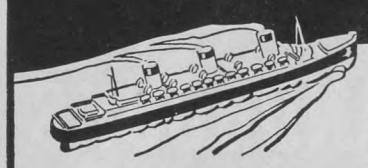
If fires can be caused in strange ways, they can often be extinguished in an equally unorthodox fashion.

When the water ran out at one big fire in Quebec, snowplows and snowblowers were called out to blast snow at the flames.

A school bus which caught fire recently was extinguished by several bottles of school milk. Milk was also used in a big fire when the water from the well ran out, while at a blaze in a Newfoundland bottling works soda pop, which contains carbon dioxide, was very successfully used to smother the flames.



***A portable grain elevator used as an emergency pump. This wrinkle was widely employed at the time of the Winnipeg flood, but has since been used elsewhere with success.***







# Sports Afield

***Some tests by which you may identify hunters who have nothing between their ears***

*by* **DOREEN WHELLAMS**

THE country is full of them—these sports afield. You have met them, possibly had them in your hunting party, and wished emphatically that they had stayed at home. They carry guns, of course, and from the minute they set out are a menace to themselves and all within gunshot range. Don't confuse them with sportsmen.

First, this sport knows little or nothing about the gun he carries, be it his own or a borrowed one, whether it is safe to use or not. He has no idea how to care for a valuable weapon and is quite apt to drop it into mud or water. He carries it constantly on the hunting trip just in case someone doesn't recognize him for the mighty hunter he is, and *you may be very sure that gun is always loaded.* He'll even wave the muzzle around to emphasize his remarks when he's sounding off to the boys about why he had the bad luck to miss that certain shot. Keep behind him, he may miss you that way when the gun goes off.

When you are in the blind or walking through bush for upland birds our sport afield will invariably shoot across you at your birds long before they come within range of anybody's gun. It never enters his head to see if anyone might be in his line of fire before he lets fly, either. He shoots at anything that moves "just for the fun of it." He's a game hog, too, and handles his gun as he would a garden rake, instead of the lethal weapon it is.

He'll be the one to lay it loaded in the bottom of the boat and be the most surprised when it goes off for some reason, and blows a hole in the bottom of the boat, if not in one of the occupants, and makes the party swim for their lives in icy water.

Usually he manages to carry a gun in the field so it points squarely at someone's midriff, or, if you are walking single file and are in front of him your stern tingles in anticipation all the while you are there. You know that gun is covering your every move. If you are behind him the muzzle stares you in the face. Between shots he likes a little stimulant and thinks it a huge joke when his unsteady gun nearly shoots his partner's hat (and head) off.

These sports afield are a very real menace and the first thought is to shun them, to let the other fellow put up with them in his party, but the sportsman has a responsibility here. These trigger happy lads must be shown the error of their careless ways. There's no need to wait until there is an accident to bring them to their senses. Take a firm stand on the behavior of members in your party right at the start of your outing—give that sport afield a chance to become a real sportsman.

### *Seven Rules for Hunters*

1. *See your gun is in good condition.* If it is not have a gunsmith repair it. No homemade repairs and no hair triggers.
2. *Always treat every gun as if it was loaded* and never load a gun until you are where you are going to shoot. Unload your gun before entering a car, camp or home.
3. *Be sure of your target*, also that there is nobody in your line of fire. No bird, or larger game, is worth a human life or limb.
4. *Never pull any gun toward you by the muzzle.* The trigger catches on something and the gun goes off. Too many hunters have died (you don't have any chance at that range) from this thoughtless act.
5. *If you have to climb a fence or tree unload your gun.* It only takes a minute and may save a life, possibly your own.
6. *Never leave a gun unattended unless you unload it first.* Someone may pick it up, likely a child, and injure himself or somebody else.
7. *Do not mix gunpowder and alcohol.* Shooting and drinking don't mix one bit better than driving and drinking.

# Three Brainy Pets

***A collection of tales about farm animals who used their wits***

### *Tired Grave Digger*

A COUPLE of springs ago I was visiting J. M. of Weirdale and, after dinner, the talk got around to dogs and gophers.

"Well," says Johnny, "that little terrier of mine is pretty hard to beat. Remember what a scorcher last Thursday turned out to be? I was plowing 'fallow and Spike was out there catching gophers to beat sixty. As soon as one showed above ground he'd pounce on it, shake it till it was limp, then drag it over to the freshly turned earth for burial. But as the day wore on and the land got smaller the number of gophers increased and Spike was hard put to kill 'em let alone dig holes for each corpse. Golly! He was a tired pup, but game: would he quit? Not on your life!

"Spike rested a moment as I came around the end," Johnny continued. "Then he seemed to make up his mind about something, grabbed a dead gopher and dodged ahead of the horses. Dang fool, I thought, you'll get yourself killed—but I hadn't noticed he had dropped his burden.

"Next time I came around I counted one, two, three—yes sir!—four laid out neat in the furrow. Spike gave a little bark as the earth hid his victims from sight, then, evidently satisfied, bounded off for more game."—Tom Bird, Foxford.

### *Maudie, the Malingerer*

MAUDIE was a small chestnut pony with white face and white feet. She was of uncertain age when she came to our farm to live.

As a small child I drove Maudie to school, in summertime, but there came a day when she got too slow, and I was considered capable of driving a more speedy steed. My brother who lived some 50 miles from us asked if he might have her, for his wife to use to go to the neighbors, for their drinking water. Dad fixed up an old buggy, and off they started.

When they got to the end of the lane Maudie turned right, the road to the school. Dad pulled left. Maudie looked back to see what was going on, perhaps she sensed something unusual when the small driver was absent, anyway before she had gone a dozen yards she developed a sudden limp. Dad examined her feet but found nothing hurting her, so urged her on, but with each step she got worse, so they turned back home.

When I returned from school I was surprised to find her still in her usual stall. Dad told me what had happened; he was still puzzled at her sudden lameness. We took her out to water and she seemed all right so next morning he tried her again. The same thing happened. Maudie turned right, Dad pulled left. Again she went lame. That finished it. She was taken back to the barn. I drove her to school a few times after that. Maudie always moved off rather slowly till we turned right on the way to school, then up would go her head and she was off. She was buried that fall on the farm she refused to leave. — Mrs. Chas. E. Morrison, Hartney.

***Alvin Whitney of Burtonsville, Alta., sends us this picture of his pooch, which is obviously a star performer.***

# The Country Boy and Girl

*The long vacation's over,*
*But still I feel quite gay*
*Because September's here again*
*And school began today!*

*BACK to school, eager to see your friends altogether again! Of course you want to start right off with a baseball game for there were times in the holidays when you hadn't enough players to make up a full team. Perhaps, too, you have a tougher muscle from working during the holidays and are anxious to see how many home runs you can make. When Saturday comes along, you may plan to go out hunting for hazel nuts and acorns. The hazel nuts you can eat right now, then store some away for Christmas time. Our acorns, however, seem too bitter to eat, but you can make little acorn dishes from them. Have you ever tried?*

*Here's a novel match scratcher to make for your father in the ways we have sketched, using the little house design or the Mexican boy. Perhaps your teacher would let your class make them in school. Use a piece of sandpaper about four inches by five inches. To draw on sandpaper, it is best to use a paint brush dipped in black ink, not too wet, or a crayon would do. The little house has a red door and chimney and the Mexican boy has a yellow hat and his face should be lightly colored brown, his scarf could be in stripes of red, yellow and green. Mount your match scratcher on a red or green sheet of paper about two inches larger than your sandpaper.*

Ann Sankey

## The Rainbow Bubbles

*by* **Mary Grannan**

DID you ever make bubbles? I'm sure you have. I'm sure that once upon a summer day, you've gotten a bowl of soapy warm water from your mother, and have taken it out into the sunlight with your bubble pipe, and made the most beautiful of rainbow bubbles.

But I'm sure too, that you don't know how those rainbow colors came to be in those bubbles of yours. That's what I'm going to tell you about.

It began like this. One morning, Mrs. Merryweather was in her kitchen, in a little white house in a valley. She had looked out into the morning sky, and had smiled. She called to Micky Merryweather, her little boy, who was playing on the back steps, "It's going to be a fine day, Micky. I can do my wash today. The rain is over."

"Yes, I think it is, Mum," called the little boy. "But there are a few little clouds playing about, up there."

"I don't think they're rain clouds, Micky," answered his mother. And then she cried out in dismay. "Micky, I have no soap! Will you please go to the store and get some for me?"

So his mother gave him a silver piece. "Now hurry, like a good boy," said Mrs. Merryweather. "Don't stop to hop in puddles. I know there are a great many nice big puddles after last night's rain. I know too," she went on, "how much you like to hop over puddles."

Micky laughed. "Yes, I do like to hop over puddles. You don't mind if I hop over a few little ones, do you Mum, as long as I hurry back with the soap?"

"Oh, I suppose not," said Mrs. Merryweather. "But for goodness sake don't drop my soap into one of them. I really need that soap."

Off went Micky Merryweather then, to the store, and he bought a cake of white soap. He sniffed it, as he went out of the store. It smelled so clean and fresh.

"And now, Mr. White Soap," the little boy laughed, "now you and I are going to do a little puddle hopping, but don't you fall in a puddle."

The sun was shining brightly now, and the puddles that lay on the street were steaming. "Well, look at the puddles, Mr. White Soap. They're getting warm under the sun. All right, come on, let's go." Micky took a running jump. Over a puddle he went. He took another running jump. Over another he went. He laughed again.

"I'm pretty smart, eh, Mr. White Soap?" he said to the package under his arm. "Well, look at you," he said frowning at the soap. "You're losing your wrapper. Is that very nice? I don't lose my jacket, just because I jump over a few puddles."

White Soap said nothing. He went quietly around the corner with Micky. Suddenly, one of the little clouds that had been playing about in the sky, decided to empty a sunshower on the earth, and down came the rain in torrents. Micky, running for shelter, dropped White Soap into the roaring gutter, and away sailed the soap. "Oh," cried the little boy, "come back here, soap, come back here, Mum needs you."

But White Soap paid no heed. He could not. He was being carried away. He lost his wrapper in his mad dash, and bubbles began to form around and about him. Little bubbles, big bubbles, all silver clear. Micky dashed after him, and caught up with him just as the biggest bubble in the world shaped itself on the soap's form. It began to rise like an air balloon, carrying the soap with it. Micky reached out, and caught the soap, but the bubble was so great in size and strength that Micky went up too. Up, up, up, he went. He was so amazed at what had happened he did not even cry out for help until he was high in the sky.

The Lady of the Rainbow saw him. She had come out in the sunshower. She reached out for the frightened little boy, as he passed her bow. He sat down, on her bridge of many colors and puffing, said, "Thank you, thank you so much." Then he looked about him.

"I . . . I'm on the rainbow," he cried.

"Yes," said the Lady of the bow. "And it was so nice of you to bring me this beautiful silver ball. I've never seen anything so lovely."

Micky laughed. "That's not a ball, Lady Rainbow, that's a bubble." And Micky put his finger against it. It sputtered and disappeared. It was now the Rainbow's turn to be amazed.

"Are you magic?" she gasped.

"No," laughed Micky. "I'm not magic. Anyone can make bubbles with soap and water." Micky showed the Lady of the Rainbow the bar of soap that he had in his hand.

She stared at the bar. "May I have it?" she asked.

Micky shook his head. "I'm sorry," he said, "but my mother sent me to the store to get this soap. She's waiting for me right now. She uses the soap in her wash."

The Lady of the Rainbow looked so sad that Micky said, "I'll tell you what I will do," the little boy smiled, "I'll give you half."

He broke the bar in two, and handed one piece to the Lady of the Rainbow.

"Thank you," said the Lady of the Rainbow. "Because you have been so kind, I shall give a gift to you. From this day forward, when you make bubbles, I shall color them with the red, orange, yellow, blue, green and violet of my bow."

She kept her word, and from that day, soap bubbles have carried the rainbow colors.

## Birds of the Prairies

WHY is that greyish-brown bird with the red patch on its head standing in the ant hill? Let's watch him. Why, he's sticking his tongue into the ant hill! That grey bird is a flicker and he waits until the ants swarm onto his long sticky tongue, then he pulls it in. He is making a good meal from the ant hill, as many as a thousand ants at one time!

Our flicker is well known to boys and girls of the prairies. You may know it by its song which sounds "flicker, flicker, flicker" when he is courting in the spring, or by noticing its white rump patch as it flies by with its characteristic bounding flight. You may have been fortunate enough to have a flicker choose your bird house to make his home as flickers are happy to find a ready-made nest and will use its old nest in a hollow tree over and over again. Both mother and father flicker take a turn at incubating the six to ten shiny white eggs, the female in the daytime and the male at night. The parents feed their young by jabbing their bills down the throats of the baby birds until you think they surely would kill them, but instead the young receive the ants which the parents had eaten at the ant hill shortly before.

Directions for coloring the flicker: crown and back of neck, plain grey with a bright scarlet red V-shape just below the crown. Back and wings, greyish-brown with bars of black. Chest and cheeks, lilac-brown with a cheek patch or mustache of black. Lower chest, lilac-brown spotted with black and a black chest patch. Bill and feet are black.—A.T.

National Audubon Society illustration.

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## *Transport Control*

The government's appointment of a transport controller in the person of R. W. Milner will meet with general approval. If there is any criticism it will be that the appointment should have been made sooner for the situation with respect to grain movement has been in the making for some time. Grain handlers had a bad enough time with the 1950-51 crop and nothing but a relative crop failure would have eased their troubles in moving this year's production. As it turns out, some 735 million bushels of grain, a record crop, will be offered for sale at primary markets in this crop year.

The newly created office will have wide powers over rail and lake movements. The controller will have power to alter the pattern of grain movements if such alteration will utilize Canada's transportation resources to better advantage. He can pass more wheat through Vancouver and Churchill. He can divert ore boats. He may save some time on the turn-around at lakehead, although this is surrounded by enormous technical difficulties. But one thing he cannot do. He cannot materially increase the number of boxcars on Canadian rails, nor raise the space aboard lake freighters. American lake carriers have shown themselves progressively less interested in the Canadian grain trade since the peak period of wartime movement. In any case they are fully occupied, due in large measure to the movement of ore to a steel industry producing over 100 per cent rated capacity. American boxcars are needed at home to contend with the heavy volume of goods produced under the stimulus of rearmament. The physical limitations under which the controller must work are severe, so severe that it has been ungraciously suggested that the government is picking out a goat in advance.

Mr. Milner, however, is not the type of man who offers himself readily in a sacrificial role. His acceptance of the job is a guarantee that he believes that he can do something to move the crop off the farms of western Canada faster than would otherwise be the case. But he cannot work miracles, and growers must be warned in advance that with the best performance humanly possible, lack of adequate transport service will plague them throughout the coming crop year.

## *Rail-Truck Competition*

The question of railroad competition was revived last month by the grant of additional licences by the Ontario Public Utilities Board to truckers hauling from Ontario points to western Canada.

At first sight this seems to be a desirable development. Westerners have always been penalized by high freight rates, high because of the lack of competition among public carriers. The first impulse is to say that the initiation of this road traffic provides the first instalment of the much needed competition: the more the better.

That, of course, is quite a superficial view. Westerners are very much concerned about the movement of bulk commodities like grain and coal, which can never be moved economically over long distances by road. These commodities make up a big share of the business of the railways in this part of Canada. It is generally acknowledged that the railways must be allowed to make a reasonable profit to maintain their properties in good physical condition and to attract the necessary capital for their efficient operation. The freight rate on grain is regulated by the Crow's Nest Pass Agreement. In many rate revisions coal has received preferential treatment.

Shippers cannot have it both ways. If a big volume of bulk traffic is to move at a low rate, assuming an income below which the railways cannot safely go, they must find their compensation on other classes of goods. It is this more profitable class of traffic which the truckers plan to take away from the railway. Unofficial figures indicate that truckers are now receiving 25 per cent of Canada's transportation dollar and moving only three per cent of its ton-miles. The upshot of this development will be another onslaught on the Crow's Nest Agreement on the ground that public policy has allowed competitors to raid the railways' more profitable business.

In Australia and South Africa where an identical problem has arisen, road haulers have been limited to a short radius of operation, 25 miles in the former country. Great Britain is facing the same problem from a different angle. That country must reduce its production costs. Internal transportation costs are part of production costs, therefore it must utilize its well-developed transportation systems to the best advantage, using whichever is most economical in any given case. Considering wear and tear on highways maintained at public expense, long distance road haulage has been deemed uneconomical. The British have therefore raised a ban against it. In the United States the same problem has been met, not by prohibitions, but by the imposition of licences for interstate movement which for long moves are far higher in the aggregate than Canadian licences for comparative hauls.

Enough has been said in the foregoing to indicate that representative farm bodies should look a long way ahead before taking sides in this controversy.

## *A Powerful Convert*

When President Truman required a top flight business administrator to direct American defence mobilization he went outside his party and chose a Republican, Chas. E. Wilson, president of the immense General Electric Co. Mr. Wilson is a man who rose from the ranks. He is a tough, forceful American business man, strictly orthodox, and a firm believer in the sanctity of private enterprise.

But responsibility for American preparedness has given him a viewpoint wider than that which directed his judgments as a captain of industry. In the New York Times of August 26 he contributes an article which is more than a confession. It is the passionate assertion of a conviction that opinions which he might have expressed in former times have no point now that the American people find themselves the leaders of the free world in a state of emergency. In a word, Mr. Wilson is out for controls.

Instead of being the representative of a single industry he must now think in terms of the nation's needs. From his new vantage point he can see shoals and breakers which were not apparent from a lower deck. A few excerpts from his article illustrate.

> "I have been asked many times recently how can I have been so outspoken against controls in 1946 and so vehement for them in 1951. The point is, I haven't changed; conditions have . . . When consumer goods begin to get scarce and people with money in their pockets start bidding up the price of what goods are available, the situation has in it the seeds of runaway inflation. This inflation could wreck the family budget, destroy the value of the dollar, and bankrupt the nation.
>
> "The most unpleasant aspect of the fight against the controls program has to do with the greed and selfishness and high pressure by powerful groups. Lobbies of all kinds have been at work either to kill controls completely or else to wring the law to their own particular advantage.
>
> "Such callous indifference to the welfare of the nation and concern for the pocket book are particularly revolting when compared with the sacrifices that have been made elsewhere in human life and limb. The government takes young men from their schools and homes, subjects them to military discipline, and sends them to faraway places, sometimes to be killed or maimed. These young men have no recourse, no lobbies in Congress to forestall their sacrifice.
>
> "Yet powerful interests fight the government because they want only outsized profits. Lives can be sacrificed, dollars never."

This is no Socialist speaking. This has become the credo of a conservative of exceptional calibre, who would take second place to no man in asserting the rights of the business fraternity. Granted the situation in Canada is not exactly what it is in the United States. Granted also that many patriotic men in both countries sincerely oppose controls for reasons they consider irrefutable, and based on better foundations than selfishness. Nevertheless, when a man of Mr. Wilson's background and standing speaks so plainly, there must have been some shifting of opinion about controls since rearmament started in earnest, and the cost of living failed to level off as predicted by opponents of controls.

## *A Timely Protest*

Some wise Canadian has said that for the first 75 years of its life this country kept continually reminding the British government that Canada would mind its own business and be pleased if other people kept their hands out of its affairs. Having gained nationhood, for the next 75 years we shall be reminding the American government in the same sense.

We do not know if these reminders will be accepted with as good grace in Washington as they were in London. The friendly relations which have existed between these two countries, in spite of some grounds for difference, make us hope that it will be so. Yet protests must be made when called for, as in the recent case of E. Herbert Norman, chief of the Canadian delegation to the United Nations.

Last month a witness testified to a Congressional committee that Mr. Norman had communist sympathies or affiliations in the past. The Canadian department of external affairs promptly undertook a double check, after which it declared the allegations to be unfounded.

If Congressmen choose to give time at their hearings to the tribe of doubtful witnesses who have made the headlines since Whittaker Chambers achieved fame, or infamy, they cannot prevent the mention of any name which the witness wishes to blackball. But courtesy and fairness require that if the names of foreigners are to be accepted for the record, such hearings should not be open to sensation-hunting reporters. Proper safeguards against publicity should be afforded. The foreign government concerned can then be notified through diplomatic channels if the reliability of one of its trusted servants is challenged, instead of pursuing the matter in public inquiry in the United States, as suggested by counsel for the Congressional committee.

Canada wants no McCarthyism. It has its own courts for inquiry under due process of law which provides means for protecting persons wrongfully accused. It is most fitting that Ottawa should have protested the attempted smearing of Mr. Norman.

## *The Battle against Inflation*

Mr. St. Laurent's keenly awaited broadcast on the government's anti-inflation policies has come and gone and we are no wiser. Press reports of it contain nothing that we did not know before. The government stand on controls remains what it was. It will not impose direct controls now, but warns the public that they may be inevitable at a later date. The government will continue to depend on the indirect anti-inflation measures now in effect. It will continue to administer hopefully the same prescription it has been using, under which the temperature of the body economic has risen to 188.9, a historic record. The prime minister is on indisputable ground when he states that these measures have done much to keep inflation within its present bounds. But is that good enough?

In spite of all the hopeful declarations to the contrary, hard-headed common sense has indicated throughout the summer that inflationary tendencies were not being adequately checked. The Bank of Montreal August report draws attention to the inflationary effect of Canada's capital expenditure program of $4,561 millions for 1951. The relaxations recently forced on the American defence mobilization controller pave the way for a new round of wage increases, which will lead to further price increases, with the inevitable effect on the Canadian economy. The sole grain of comfort in the prime minister's September 4 broadcast was that it contained no indication that the government would relax its measures to curtail luxury buying.